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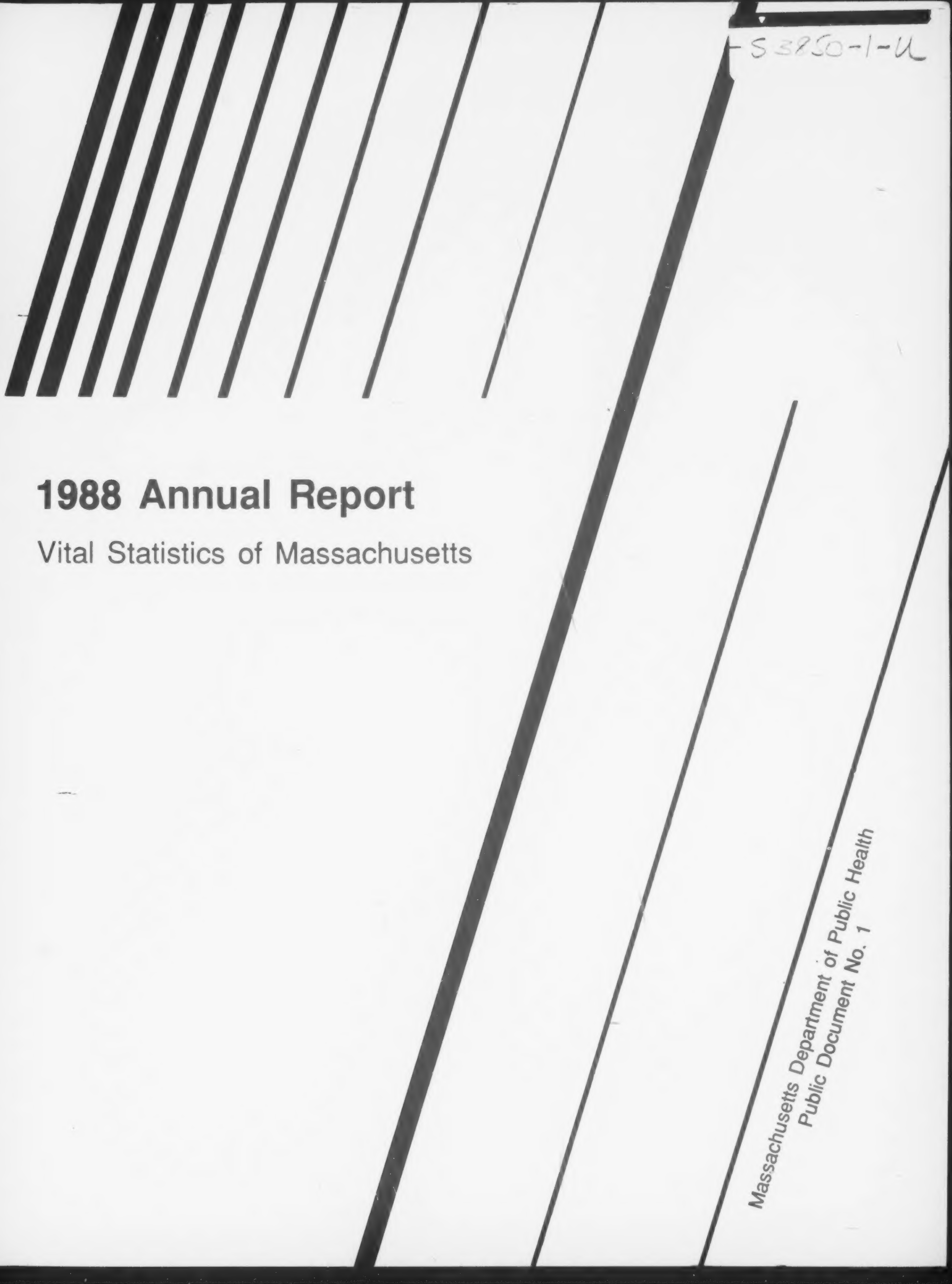

1988 Annual Report

Vital Statistics of Massachusetts

Massachusetts Department of Public Health
Public Document No. 1

The Commonwealth of Massachusetts
Executive Office of Human Services
Department of Public Health
150 Tremont Street
Boston 02111

Michael S. Dukakis
Governor

Philip W. Johnston
Secretary

David H. Mulligan
Commissioner

September, 1990

To the Honorable Senate and
House of Representatives:

We have the honor to submit as required by Chapter 111, Section 2 of the General Laws, the one hundred forty-seventh annual report on statistics of births, deaths, fetal deaths, marriages and divorces in Massachusetts for the calendar year 1988.

This is the twenty-fifth Annual Report of Vital Statistics published by the Department of Public Health and is intended to assist in the development of policy and programmatic initiatives within the Department, as well as to provide State officials and agencies, and the general public, with valuable statistical information.

Sincerely,

David H Mulligan

David H. Mulligan
Commissioner

ANNUAL REPORT
VITAL STATISTICS OF MASSACHUSETTS
(PUBLIC DOCUMENT #1)
1988

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH

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PHILIP W. JOHNSTON, *SECRETARY, EXECUTIVE OFFICE OF HUMAN SERVICES*
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SEPTEMBER, 1990

Publication of this document approved by Ric Murphy, State Purchasing Agent

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This publication of the 1988 ANNUAL REPORT OF VITAL STATISTICS is the result of the combined efforts of all data providers, including the 351 city and town clerks, hospital personnel, physicians, funeral directors, probate courts, clinics, and Department of Public Health personnel. We gratefully acknowledge the assistance provided by all data providers, without whose efforts there would be no vital statistics.

Department of Public Health staff most significantly involved in the production of the 1988 ANNUAL REPORT OF VITAL STATISTICS include:

Robert Danley, Bureau of Health Statistics, Research and Evaluation: population statistics;

Joan Gancarski, Bureau of Health Statistics, Research and Evaluation: assistance and technical data from Advance Data: Births 1988 and Advance Data: Deaths 1988;

Michael Healey, Division of Data Processing: data file management and vital events series printouts;

Duke Rhoden, Bureau of Health Statistics, Research and Evaluation: supervision of computer graphics and special table production, with programming by Robert S. Woodburn and Charlene Zion;

Dennis Sterzin and Roger Davenport, Graphic Design Center: graphics layout and assistance;

Phyllis Zeuli, Assistant Registrar for Statistics: supervision of data collection, coding and editing, with technical assistance from Lisa Varnerin (Statistics Unit Supervisor) and Robert Coffin (Chief Nosologist).

The joint efforts of all the staff of the Registry of Vital Records and Statistics are necessary to produce the data contained in this publication. Special acknowledgement is made to the following Registry supervisors:

Karin Barrett, Data Quality Assurance Coordinator, who oversees the hospital query program for birth certificate data and provides assistance in developing specialized table production;

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Phyllis Rotman, Supervisor of the Registration Unit, which is responsible for coordination with cities and towns to produce the data in a timely fashion.

The 1988 ANNUAL REPORT OF VITAL STATISTICS has been compiled and produced under the general supervision and direction of:

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INTRODUCTION

The **ANNUAL REPORT OF VITAL STATISTICS (Public Document No. 1)** has been continuously published since 1842. This is the 25th edition produced by the Department of Public Health. This report, required under the provisions of Chapter 111, section 2, of the Massachusetts General Laws, tabulates data on Massachusetts births, fetal deaths, deaths, marriages, divorces, and population for calendar year 1988. Approximately 2,000 copies of the report are distributed to federal, state, and local governmental agencies, private and public health planners and researchers, students, and members of the general public. The report provides its users with an overview of the health status of the Massachusetts population.

Vital statistics data may be tabulated either in terms of resident data or occurrence data. Resident data include all events which occur to residents of the Commonwealth, wherever the events occur. Occurrence data include all those events which occur within the state, including those which occur to out-of-state residents. There is an interstate exchange of copies of birth, death and fetal death records among the fifty states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and all Canadian provinces. These records are exchanged for statistical purposes only, for events which occur in states other than where the individual resides. This exchange allows each of the states and provinces to track the births and deaths of their residents. The majority of the data presented in this report for births and deaths is based on resident data. Marriage and divorce data, however, only reflect events which occurred within the Commonwealth.

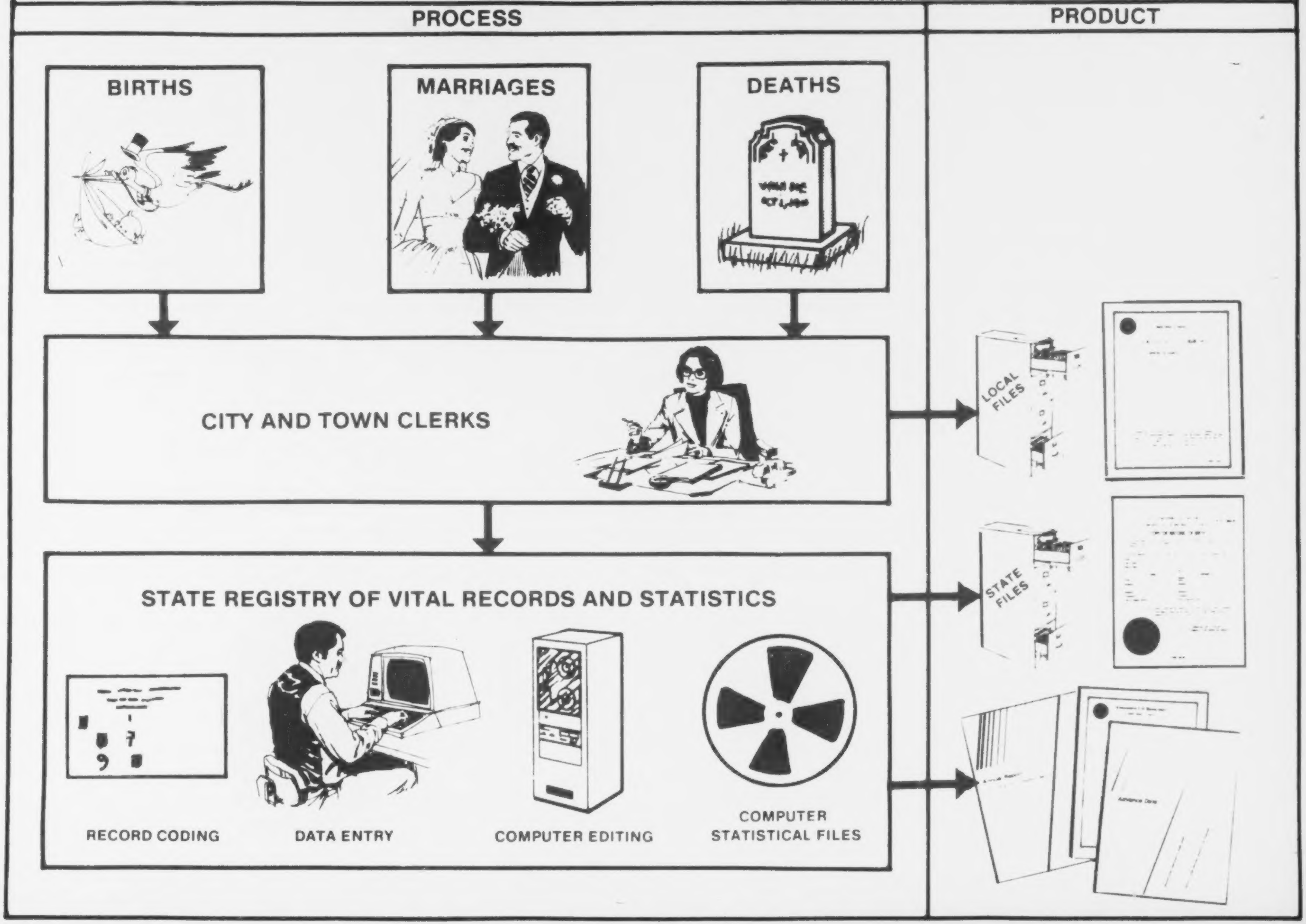
REGISTRATION

The first government–operated system of vital events registration anywhere in the world began in the Commonwealth of Massachusetts in 1639 under colonial administration. Prior to that time, in countries such as England with a vital registration system, the responsibility for the registration of vital events had been placed on church officials. The Massachusetts system mandated the registration of vital events by the clerks of the communities. In 1843, the Massachusetts legislature established the first statewide coordination for the registration of these events by requiring that copies of the events registered in the local cities and towns be sent to the Secretary of State. The first year of collection was designated for 1841. In 1976, the responsibility for the state coordination was transferred to the Department of Public Health. This was accomplished to rejoin the statistical and registration functions which had been separated by the 1964 transfer of the statistical function to the Department of Public Health. With the exception of the administrative location of the State Registry, the actual mechanics of the system have changed remarkably little over the years.

With limited exceptions, most vital records in Massachusetts are open, public records. The figure on the next page illustrates the registration process in Massachusetts. For open birth and death records, there is a triple registration process in Massachusetts. The event is first recorded in the city or town where the event occurred. The clerk of that community is then required to forward a certified copy of the record to both the community where the person resided at the time of the event and to the State Registry. Certified copies of the records may be issued from local or state records. If the record is a restricted record, such as those of out–of–wedlock births, the registration occurs only in the community where the event occurred and in the state office.

In addition to receiving a legal copy of each birth record from the city or town in which the birth occurred, the State Registry also receives a confidential copy of the birth record directly from the hospital or birth center where the birth occurred. This copy includes confidential medical information in addition to the legal information. It is this copy of the record which is processed to produce the statistical information on births contained in this report.

The Vital Records and Statistics Process


PROCESS
PRODUCT
BIRTHS
MARRIAGES
DEATHS
CITY AND TOWN CLERKS
LOCAL FILES
STATE REGISTRY OF VITAL RECORDS AND STATISTICS
STATE FILES
RECORD CODING
DATA ENTRY
COMPUTER EDITING
COMPUTER STATISTICAL FILES

Since 1986, the State Registry has developed a program of direct electronic transmission of birth records from hospitals. The system used in Massachusetts is called the Automated Vital Statistics System (AVSS). It was developed at the University of California, Santa Barbara. More than 50 percent of all birth records are now received through this method. AVSS has contributed to reducing processing time at both the hospital and the State Registry, while the built-in edits of the system increase the quality of the data.

Anyone wishing to be married in the Commonwealth may receive their license from any of the 351 cities or towns in the state, regardless of where they reside or where the marriage is to take place in the Commonwealth. The community issuing the license is required to send an attested copy of the marriage record to the State Registry.

The Registry of Vital Records and Statistics receives directly from hospitals or physicians the reports of fetal deaths of either twenty or more weeks gestation or a weight of at least 350 grams. There are no local filings of fetal death reports.

Abstracts of divorces granted are also sent directly to the State Registry from the Registers of Probate from each county probate court.

STATISTICAL PROCESSING AND TABULATING

The records received in the State Registry are carefully examined for legal errors and inconsistencies. As part of the computerization process, significant computer editing is also done. A computerized hospital query program is part of the AVSS program. The Registry also has a data quality assurance program that includes the on-site instruction of clerks and hospital personnel who have difficulties in reporting, and training to all groups involved in the data collection process.

Annually, when registration is considered as complete as possible, statistics are aggregated for presentation in this report, special studies, and program monitoring and surveillance.

Anyone using statistical information for comparisons over time should be aware of inconsistencies and changing conventions for classification and coding. This is particularly important when using cause of death information. Codes used for classifying cause of death in this report are based on the Ninth Revision of the International Classification of Diseases, World Health Organization. Classification of variables such as race, nativity, and marital status may also differ over time.

It is hoped that this report will be useful to a wide range of health data users in the Commonwealth, as well as to educational planners, demographers, and historians. Questions concerning these data and requests for more detailed findings should be directed to:

Massachusetts Department of Public Health
Bureau of Health Statistics, Research and Evaluation
150 Tremont Street
Boston, Massachusetts 02111
(617) 727-DATA

VITAL EVENTS

SECTION A

VITAL EVENTS

HIGHLIGHTS

LIVE BIRTHS

- In 1988, there were 88,047 live births to Massachusetts residents.
- Live births increased by 4.4% from 1987 to 1988.
- The 1988 live birth rate in Massachusetts per 1,000 population increased from 14.4 in 1987 to 15.0 in 1988.
- Massachusetts' 1988 live birth rate of 15.0 per 1,000 population remains below the 1988 U.S. rate of 15.9.
- The largest number of births occurred in July (9.0%—7,944), and the fewest occurred in February (7.4%—6,526).

DEATHS

- In 1988, 56,407 Massachusetts residents died.
- The number of deaths increased by 1.5% from 1987 to 1988.
- The rate of deaths per 1,000 population also increased slightly from 9.5 in 1987 to 9.6 in 1988.
- The U.S. death rate increased in 1988 to 8.8. (Differences between the crude death rates in Massachusetts and the U.S. may reflect differences in the age distribution of the population.)
- The largest number of deaths occurred in March (9.3%—5,230), and the fewest occurred in September (7.6%—4,292).

FETAL DEATHS

- There were 529 reportable fetal deaths to Massachusetts residents in 1988.
- Reportable fetal deaths increased by 6.2% from 1987 to 1988, resulting in a fetal death rate of 6.0 per 1,000 live births and fetal deaths.

INFANT DEATHS

- In 1988, 693 infant deaths (those less than 1 year) occurred to Massachusetts residents.
- The Massachusetts infant mortality rate increased from 7.2 deaths per 1,000 live births in 1987 to 7.9 deaths in 1983.
- In 1988, the black infant mortality rate increased from 15.5 in 1987 to 17.2 in 1988.
- The Massachusetts 1988 infant mortality rate of 7.9 per 1,000 live births was 20 percent below the U.S. rate of 9.9.

MARRIAGES

- In 1988, there were 49,941 marriages in Massachusetts.
- The number of marriages increased by 1.8% from 1987 to 1988. Nationally, the number of marriages decreased by 1.3% during the same period.
- The 1988 Massachusetts rate of 8.5 marriages per 1,000 population was below the U.S. rate of 9.7.
- For the second year in a row, June was replaced by October as the favorite month for marriages. In October, 1988, there were 6,739 occurrence marriages (12.6% of all marriages), and the fewest again occurred in January (1,682—3.4%).

DIVORCES

- In 1988, 17,676 divorces were granted in Massachusetts.
- Divorces in Massachusetts increased by 4.2% from 1987 to 1988.
- The 1988 Massachusetts divorce rate of 3.0 divorces per 1,000 population was below the U. S. rate of 4.8.
- The largest number of divorces was finalized in August with 1,636 (9.3%), and the fewest in May (1,275—7.2%).

NATURAL INCREASE

- The rate of natural increase in Massachusetts reflected an increase to 5.4 per 1,000 residents in 1988 from a rate of 4.9 in 1987.
- The 1988 U.S. rate of natural increase of 7.1 remains far above that of Massachusetts.

The **Vital Events** section provides basic information on all vital events. In addition to the information highlighted above, this section contains summary birth and death data by city, town and county. More detailed information is contained in the sections on the individual events.

DEFINITIONS AND RATES IMPORTANT FOR THIS SECTION INCLUDE:

OCCURRENCE	Occurrence data reflect where the event took place without regard to residence. In Massachusetts, place will be one of 351 cities or towns.
RESIDENCE	The usual place of residence as reported by the mother (for births) or the informant (for deaths). An infant's residence is considered that of the mother. While occurrence data include only events that occurred within Massachusetts, residence data for births and deaths include those which may or may not have occurred within Massachusetts.
NATURAL INCREASE	The difference between the number of resident live births and the number of resident deaths.

CRUDE RATES OF VITAL EVENTS

BIRTH RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Population}} \times 1{,}000$
FETAL MORTALITY	$\frac{\text{No. of Resident Fetal Deaths}}{\text{Resident Live Births + Resident Fetal Deaths}} \times 1{,}000$
INFANT MORTALITY	$\frac{\text{No. of Resident Deaths <1 Year}}{\text{Resident Live Births}} \times 1{,}000$
NEONATAL MORTALITY	$\frac{\text{No. of Resident Deaths <28 Days}}{\text{Resident Live Births}} \times 1{,}000$
DEATH RATE	$\frac{\text{No. of Resident Deaths}}{\text{Total Population}} \times 1{,}000$
MARRIAGE RATE	$\frac{\text{No. of Occurrence Marriages}}{\text{Total Population}} \times 1{,}000$
DIVORCE RATE	$\frac{\text{No. of Occurrence Divorces}}{\text{Total Population}} \times 1{,}000$

TABLE A-1
SELECTED FACTS IN VITAL STATISTICS
MASSACHUSETTS
1988

NATALITY

Ages of Mothers: 13 - 51 years

Ages of Fathers: 14 - 76 years

Sets of Twins: 1,012
Sets of Quadruplets: 2

Sets of Triplets: 21
Sets of Quintuplets: 1

Most Births Occurred on: September 20, 1988 (323 births)

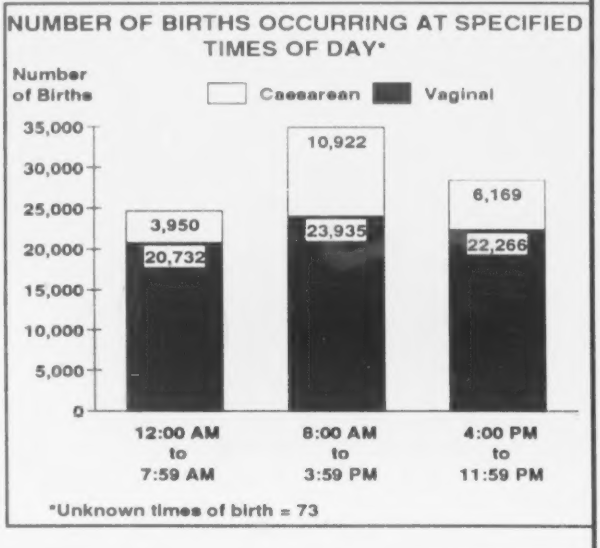
Fewest Births Occurred on: December 24, 1988 (162 births)

Highest # of Births at: Brigham and Women's Hospital (9,982 births)

Lowest # of Births at: Nantucket Cottage Hospital (89 births)

Ten Most Popular Names For Babies

Boys' Names	*Number*	*Girls' Names*	*Number*
Michael	2,044	Jessica	1,093
Matthew	1,478	Ashley	1,057
Christopher	1,442	Amanda	1,055
Daniel	1,088	Nicole	766
Andrew	1,000	Jennifer	750
David	952	Sarah	742
Nicholas	927	Stephanie	640
John	909	Elizabeth	619
Joseph	878	Lauren	582
James	847	Samantha	544


NUMBER OF BIRTHS OCCURRING AT SPECIFIED TIMES OF DAY*

*Unknown times of birth = 73

MORTALITY

Male Decedents 100 Years and Older: 58

Female Decedents 100 Years and Older: 314

Most Deaths Occurred on: March 18, 1988 (198 deaths)

Fewest Deaths Occurred on: June 25, 1988 (113 deaths)

Month most Suicides Occurred: March and October (51 each month)

Month most Homicides Occurred: May (29)

Month most Motor Vehicle Deaths Occurred: May (84)

Weekday Most Deaths Occurred: Monday (8,301 deaths)

Weekday Fewest Deaths Occurred: Wednesday (7,758 deaths)

MARRIAGE

Ages of Brides: 13 - 88 years

Ages of Grooms: 16 - 90 years

Most Popular Month for Marriages: October (6,739 marriages)

Least Popular Month for Marriages: January (1,682 marriages)

Greatest Age Difference When Bride Older than Groom: 36 years

Greatest Age Difference When Groom Older than Bride: 45 years

DIVORCE

Length of Marriages Involved in Divorces: <1 Year to 56 Years of Marriage

Most Common Length of Marriage Prior to Divorce: 3 Years

Month Most Divorces Granted: August (1,637 divorces)

Month Fewest Divorces Granted: May (1,275 divorces)

FIGURE A-1

1988 MASSACHUSETTS VITAL EVENTS

Each day Massachusetts residents had approximately:

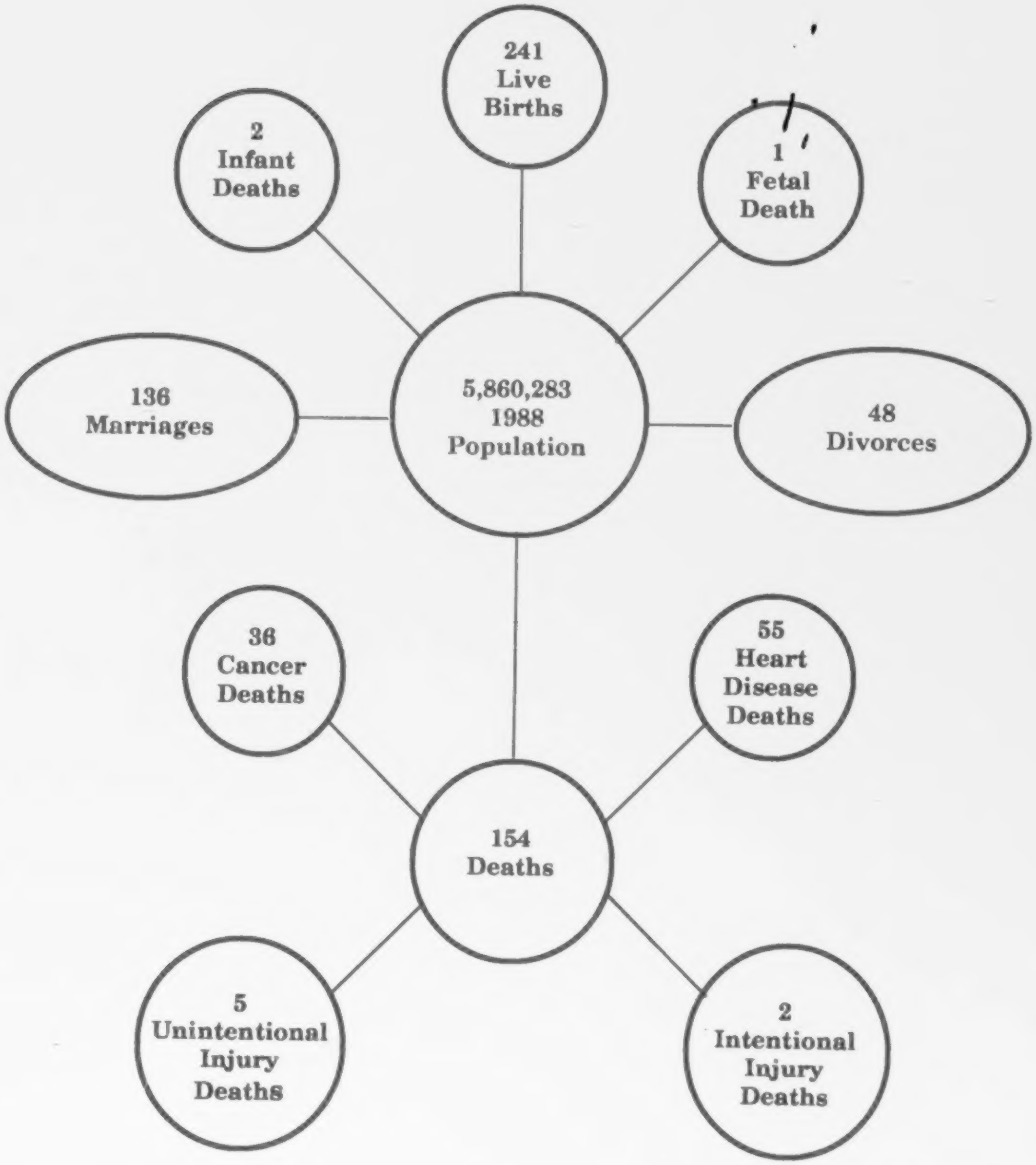

241 Live Births
2 Infant Deaths
1 Fetal Death
136 Marriages
5,860,283 1988 Population
48 Divorces
36 Cancer Deaths
55 Heart Disease Deaths
154 Deaths
5 Unintentional Injury Deaths
2 Intentional Injury Deaths

TABLE A-2
NUMBER AND CRUDE RATES OF VITAL EVENTS - MASSACHUSETTS AND UNITED STATES
1988 AND 1987

VITAL EVENT	Massachusetts					United States				
	1988		1987			1988		1987		
	Number	Rate	Number	Rate	% Change in Rates	Number	Rate	Number	Rate	% Change in Rates
LIVE BIRTHS	88,047	15.0	84,343	14.4	+ 4.2	3,909,510	15.9	3,809,394	15.7	+ 2.0
FETAL DEATHS	529	6.0	498	5.9	+ 1.7	NA	NA	59,358	7.6	NA
TOTAL DEATHS	56,407	9.6	55,562	9.5	+ 1.0	2,171,000**	8.8**	2,123,323	8.7	+ 1.2
Infant Deaths	693	7.9	608	7.2	+ 9.7	38,700**	9.9**	38,408	10.0*	- 1.0
Neonatal Deaths	477	5.4	432	5.1	+ 5.9	24,990**	6.4**	24,627	6.5	- 1.5
MARRIAGES	49,941	8.5	49,034	8.4	+ 1.2	2,389,000**	9.7**	2,403,378*	9.9	- 2.0
DIVORCES	17,676	3.0	16,994	2.9	+ 3.4	1,183,000**	4.8**	1,157,000**	4.8**	0.0

NOTES: Neonatal and infant deaths are included in total deaths; neonatal deaths are included in infants; fetal deaths are excluded from total deaths. Figures for marriages and divorces reflect occurrence, not residence.

The rates for live births, total deaths, marriages and divorces are per 1,000 population.

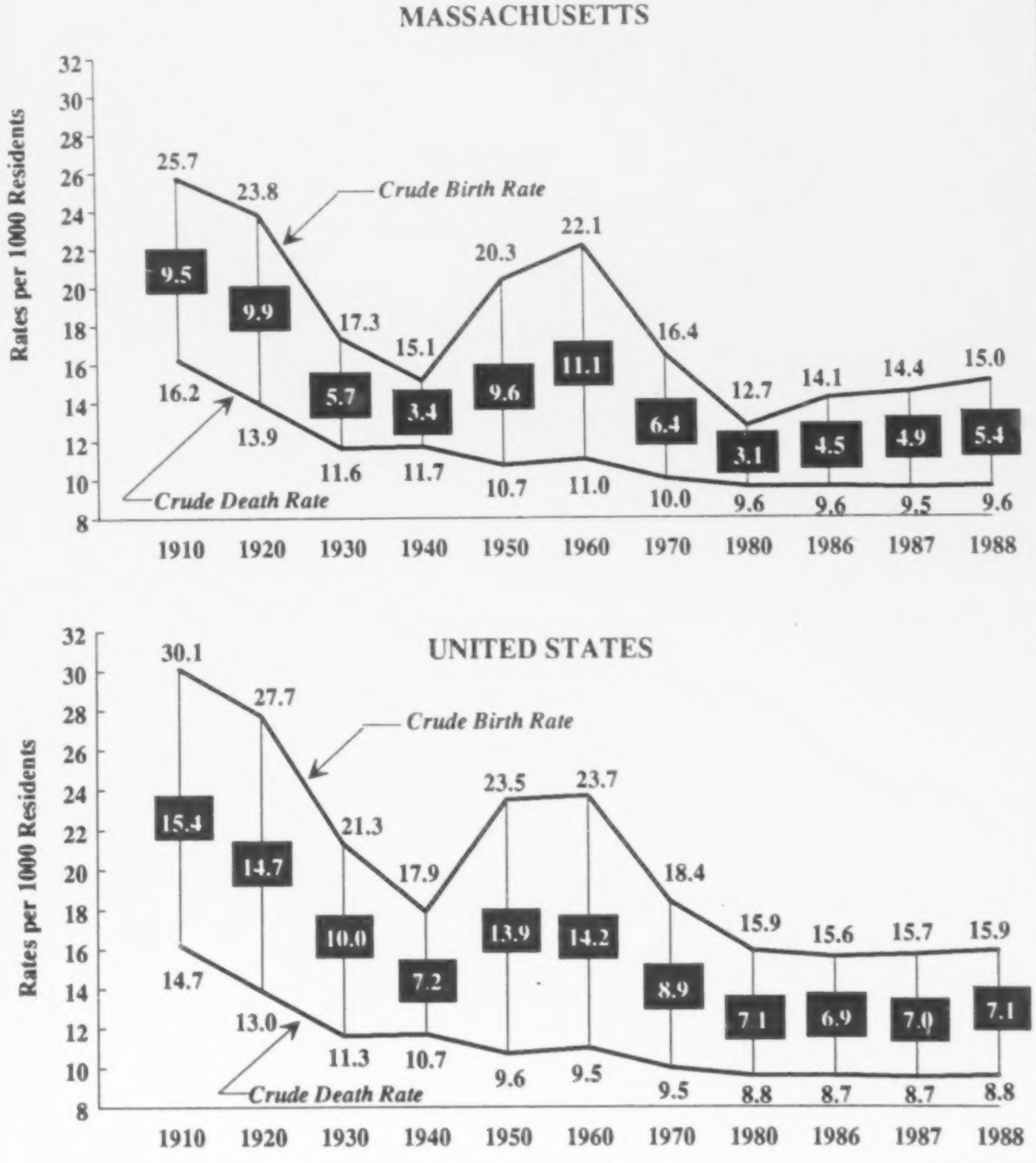
Rates for infant and neonatal deaths are per 1,000 live births.

Rates for fetal deaths are per 1,000 live births and fetal deaths.

* =Revised
**=Provisional
NA=Not available

FIGURE A-2

RATE OF NATURAL INCREASE
1910 - 1988



MASSACHUSETTS

UNITED STATES

TABLE A-3
VITAL EVENTS BY MONTH
MASSACHUSETTS RESIDENTS
1988

	BIRTHS	FETAL DEATHS	DEATHS	Infant Deaths*	Neonatal Deaths*	MARRIAGES	DIVORCES
TOTALS	88,047	529	56,407	693	477	49,941	17,676
January N	6,839	43	5,048	40	25	1,682	1,493
Rank	11	6	2	11	10	12	6
February N	6,526	44	4,819	61	39	2,339	1,512
Rank	12	5	4	5	6	10	4
March N	7,303	34	5,230	62	50	2,108	1,504
Rank	7	10	1	4	2	11	5
April N	7,282	43	4,657	58	40	3,876	1,415
Rank	8	6	6	6	5	7	9
May N	7,826	61	4,525	74	55	5,475	1,275
Rank	3	1	9	2	1	4	11
June N	7,460	40	4,503	45	31	5,861	1,483
Rank	5	8	10	10	9	3	7
July N	7,944	56	4,453	51	38	4,788	1,625
Rank	1	2	11	8	7	6	2
August N	7,845	47	4,585	49	39	5,232	1,637
Rank	2	4	7	9	6	5	1
September N	7,680	39	4,292	68	46	6,113	1,590
Rank	4	9	12	3	3	2	3
October N	7,377	33	4,718	54	39	6,739	1,429
Rank	6	11	5	7	6	1	8
November N	6,984	48	4,564	80	43	3,348	1,298
Rank	9	3	8	1	4	8	10
December N	6,981	41	5,013	51	32	2,380	1,415
Rank	10	7	3	8	8	9	9

*Infant and neonatal deaths are included in total resident deaths; neonatal deaths are included in infant deaths.

TABLE A-4A
VITAL EVENTS BY COMMUNITY
1988

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
ABINGTON	14029	0	202	45	110	1	1	101	229	92
ACTON	17333	1	274	62	73	0	0	163	121	201
ACUSHNET	9118	0	100	17	80	1	0	73	58	20
ADAMS	10034	0	107	27	119	1	0	64	68	-12
AGAWAM	27136	1	342	168	257	4	4	198	252	85
ALFORD	399	1	5	0	3	0	0	0	0	2
AMESBURY	14567	2	274	145	131	0	0	124	92	143
AMHERST	33591	5	192	39	105	0	0	171	171	87
ANDOVER	26970	1	326	66	205	0	0	288	337	121
ARLINGTON	43838	1	572	384	525	6	5	383	230	47
ASHBURNHAM	5162	0	68	7	27	0	0	28	28	41
ASHBY	2860	0	33	0	10	0	0	11	17	23
ASHFIELD	1545	1	28	2	9	0	0	6	13	19
ASHLAND	11656	0	201	17	63	3	3	106	83	138
ATHOL	10815	1	198	140	126	3	3	93	66	72
ATTLEBORO	35227	1015	681	501	329	8	7	364	299	352
AUBURN	14360	0	206	22	139	1	1	125	111	67
AVON	4776	0	74	5	39	0	0	45	46	35
AYER	6794	1	320	146	56	5	3	219	184	264
BARNSTABLE	38126	1267	526	957	509	6	3	471	584	17
BARRE	4412	3	64	14	41	1	1	37	50	23
BECKET	1683	1	21	5	14	0	0	8	9	7
BEDFORD	12385	1	233	172	128	3	1	132	127	105
BELCHERTOWN	10340	1	140	10	54	1	1	55	57	86
BELLINGHAM	14238	0	246	16	84	1	1	137	111	162
BELMONT	24679	4	258	101	283	2	2	285	252	-25
BERKLEY	4013	0	58	4	19	1	0	9	11	39
BERLIN	2228	0	33	8	19	0	0	19	37	14
BERNARDSTON	1816	0	25	4	11	0	0	13	19	14
BEVERLY	36432	1515	545	626	422	2	2	364	378	123
BILLERICA	37892	3	538	70	203	0	0	279	244	335
BLACKSTONE	7280	0	121	14	62	0	0	71	48	59

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(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A
VITAL EVENTS BY COMMUNITY
1988

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
BLANDFORD	1149	1	23	0	6	0	0	5	4	17
BOLTON	2918	1	52	4	12	0	0	18	25	40
BOSTON	571974	21518	9709	9586	5670	136	98	4306	4274	4039
BOURNE	16484	0	257	71	165	0	0	105	134	92
BOXBOROUGH	3065	0	54	3	15	0	0	26	20	39
BOXFORD	6312	0	47	1	28	0	0	28	27	19
BOYLSTON	3530	0	64	47	30	0	0	23	27	34
BRAINTREE	35022	0	396	318	418	3	3	317	291	-22
BREWSTER	7249	0	115	95	91	0	0	77	149	24
BRIDGEWATER	19620	0	262	34	107	3	3	129	114	155
BRIMFIELD	2766	0	46	2	14	0	0	3	17	32
BROCKTON	96601	1209	1823	1429	930	10	6	791	626	893
BROOKFIELD	2827	0	40	7	23	0	0	17	21	17
BROOKLINE	52868	1	618	211	559	1	1	577	417	59
BUCKLAND	1916	0	13	6	18	0	0	12	9	-5
BURLINGTON	22816	0	273	352	115	0	0	247	203	158
CAMBRIDGE	89628	1993	1224	1274	752	9	3	978	1179	472
CANTON	18369	2	192	50	180	2	1	166	124	12
CARLISLE	4304	0	71	6	20	1	1	18	20	51
CARVER	11033	0	175	25	82	0	0	43	51	93
CHARLEMONT	1228	0	21	1	19	0	0	8	15	2
CHARLTON	8403	3	156	40	66	3	0	52	40	90
CHATHAM	6462	0	55	97	113	2	0	84	109	-58
CHELMSFORD	31601	1	432	106	247	0	0	332	331	185
CHELSEA	25668	5	666	106	342	8	6	242	243	324
CHESHIRE	3299	0	39	5	22	0	0	12	16	17
CHESTER	1217	0	15	3	7	0	0	3	5	8
CHESTERFIELD	1286	0	13	2	5	0	0	5	3	8
CHICOPEE	56411	3	739	168	619	5	4	429	398	120
CHILMARK	653	0	8	2	6	0	0	15	30	2
CLARKSBURG	1783	0	15	1	15	0	0	2	10	0
CLINTON	12503	3	244	127	161	1	1	119	78	83

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1988

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
COHASSET	7267	0	69	27	57	0	0	73	126	12
COLRAIN	1683	0	25	3	20	0	0	12	6	5
CONCORD	16381	2025	180	367	124	0	0	149	195	56
CONWAY	1412	0	23	4	9	0	0	2	6	14
CUMMINGTON	851	0	8	0	7	0	0	0	7	1
DALTON	6440	1	63	35	70	0	0	41	56	-7
DANVERS	23920	767	301	402	294	2	1	236	350	7
DARTMOUTH	25705	1	249	93	266	2	2	136	160	-17
DEDHAM	23422	0	286	65	248	4	1	412	273	38
DEERFIELD	4765	0	57	24	45	0	0	35	62	12
DENNIS	14480	2	157	119	241	1	0	122	94	-84
DIGHTON	5477	0	67	14	47	0	0	46	44	20
DOUGLAS	4789	0	80	9	42	0	0	34	27	38
DOVER	4809	0	40	8	34	2	0	23	33	6
DRACUT	24575	0	409	28	201	3	2	183	173	208
DUDLEY	8947	3	115	11	80	1	1	81	82	35
DUNSTABLE	2150	0	30	3	12	0	0	6	9	18
DUXBURY	14156	2	147	49	94	0	0	89	128	53
EAST BRIDGEWATER	10473	0	156	23	78	1	1	86	133	78
EAST BROOKFIELD	1805	0	28	4	17	0	0	13	33	11
EAST LONGMEADOW	12848	0	143	141	145	0	0	129	103	-2
EASTHAM	4432	0	56	29	58	0	0	29	53	-2
EASTHAMPTON	16751	0	207	24	173	1	0	166	119	34
EASTON	19926	0	273	40	127	2	1	145	205	146
EDGARTOWN	3054	0	45	5	34	3	2	64	98	11
EGREMONT	1313	0	10	5	18	0	0	3	3	-8
ERVING	1442	0	16	4	13	0	0	2	3	3
ESSEX	2956	0	41	7	28	0	0	14	12	13
EVERETT	36184	1	538	480	422	3	2	352	320	116
FAIRHAVEN	15822	0	183	90	209	1	1	101	123	-26
FALL RIVER	89927	2051	1462	1546	1138	9	7	746	651	324
FALMOUTH	25986	634	380	398	331	5	4	287	364	49

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COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
FITCHBURG	39290	1073	778	450	433	5	2	388	338	345
FLORIDA	690	0	4	0	5	0	0	3	5	-1
FOXBOROUGH	14460	1	234	20	111	0	0	99	110	123
FRAMINGHAM	63913	2137	923	728	576	9	7	605	455	347
FRANKLIN	20190	0	389	28	113	2	0	173	165	276
FREETOWN	8096	0	103	9	40	1	1	46	118	63
GARDNER	18344	353	307	329	226	3	3	181	199	81
GAY HEAD	248	0	4	0	1	0	0	1	10	3
GEORGETOWN	5922	0	82	8	44	1	1	38	51	38
GILL	1315	0	15	1	7	0	0	7	12	8
GLOUCESTER	28066	272	411	273	282	2	1	248	316	129
GOSHEN	763	0	5	1	5	0	0	1	15	0
GOSNOLD	37	0	0	0	4	0	0	2	6	-4
GRAFTON	11994	0	185	25	92	2	2	98	95	93
GRANBY	5684	1	81	8	47	0	0	34	44	34
GRANVILLE	1345	0	22	0	10	2	2	7	9	12
GREAT BARRINGTON	7431	126	96	183	98	0	0	84	66	-2
GREENFIELD	17755	916	285	408	236	3	1	226	169	49
GROTON	7341	0	121	17	48	2	1	45	79	73
GROVELAND	5025	0	60	4	37	0	0	40	41	23
HADLEY	4268	1	43	8	27	0	0	31	41	16
HALIFAX	6403	0	99	18	59	1	0	38	35	40
HAMILTON	7083	0	110	15	59	1	0	46	74	51
HAMPDEN	4645	2	54	49	46	0	0	25	28	8
HANCOCK	598	0	7	3	6	0	0	3	9	1
HANOVER	11998	0	150	13	78	2	1	89	93	72
HANSON	9297	0	123	32	54	0	0	61	53	69
HARDWICK	2303	0	28	6	26	0	0	30	18	2
HARVARD	13585	2	53	11	19	2	1	33	33	34
HARWICH	10215	2	98	40	143	1	1	92	116	-45
HATFIELD	3218	1	22	6	33	0	0	17	19	-11
HAVERHILL	48571	702	919	629	548	8	4	433	426	371

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COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
HAWLEY	400	0	2	2	1	0	0	0	2	1
HEATH	603	2	12	1	8	0	0	2	3	4
HINGHAM	20477	2	252	73	165	2	1	163	283	87
HINSDALE	1759	0	32	23	19	0	0	4	11	13
HOLBROOK	10848	0	145	17	116	0	0	105	82	29
HOLDEN	13716	0	186	144	134	1	1	72	80	52
HOLLAND	1774	0	27	0	19	1	1	11	22	8
HOLLISTON	12865	1	170	15	51	3	3	97	122	119
HOLYOKE	42123	1527	924	1008	684	9	4	336	290	240
HOPEDALE	3977	0	94	22	49	1	1	23	39	45
HOPKINTON	9014	0	162	11	60	1	0	50	51	102
HUBBARDSTON	1991	1	50	5	20	0	0	16	9	30
HUDSON	17609	2	284	24	125	0	0	165	108	159
HULL	9843	1	187	22	72	0	0	95	66	115
HUNTINGTON	1974	0	41	1	17	1	1	8	12	24
IPSWICH	11591	0	151	52	114	3	2	91	121	37
KINGSTON	8777	0	147	17	60	2	1	77	56	87
LAKEVILLE	8234	1	115	36	61	0	0	34	49	54
LANCASTER	6217	1	100	29	46	0	0	46	54	54
LANESBOROUGH	3140	0	40	4	21	0	0	18	33	19
LAWRENCE	62684	1893	1753	753	658	15	13	553	540	1095
LEE	6027	1	87	39	59	2	1	66	58	28
LEICESTER	9702	1	151	14	81	2	2	56	66	70
LENOX	6590	1	53	51	68	0	0	56	123	-15
LEOMINSTER	35083	1291	680	316	328	5	4	358	363	352
LEVERETT	1580	0	19	3	6	0	0	10	14	13
LEXINGTON	28063	3	243	139	243	0	0	248	284	0
LEYDEN	619	1	10	2	3	0	0	2	3	7
LINCOLN	7785	0	52	5	32	0	0	29	78	20
LITTLETON	7192	0	96	36	55	1	1	66	74	41
LONGMEADOW	16293	0	126	75	156	0	0	97	97	-30
LOWELL	93705	3027	2088	1485	1033	17	13	869	812	1055

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COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
LUDLOW	18645	0	202	156	151	2	1	152	152	51
LUNENBURG	8813	0	100	8	54	0	0	56	67	46
LYNN	78223	979	1536	924	928	14	10	654	545	608
LYNNFIELD	11292	0	111	17	83	0	0	100	202	28
MALDEN	53272	1952	842	449	553	4	3	400	318	289
MANCHESTER	5064	0	69	10	40	0	0	37	57	29
MANSFIELD	14869	1	319	16	89	2	2	140	119	230
MARBLEHEAD	18864	1	217	58	181	0	0	218	233	36
MARION	4295	0	42	6	31	1	1	29	36	11
MARLBOROUGH	30959	8	564	352	289	5	5	326	221	275
MARSHFIELD	22952	4	323	35	134	0	0	181	146	189
MASHPEE	6269	1	127	37	59	1	0	53	33	68
MATTAPOISETT	6003	0	79	32	65	0	0	48	76	14
MAYNARD	9897	0	182	19	100	2	2	105	72	82
MEDFIELD	10708	0	174	26	68	2	2	62	43	106
MEDFORD	56653	1	672	400	641	3	1	464	462	31
MEDWAY	9727	0	150	24	55	2	2	53	59	95
MELROSE	28389	1207	309	480	321	4	3	228	234	-12
MENDON	3528	0	52	6	21	0	0	23	46	31
MERRIMAC	4867	0	74	5	35	0	0	21	17	39
METHUEN	39912	1225	595	586	408	3	2	329	259	187
MIDDLEBOROUGH	18397	2	311	218	157	2	2	163	130	154
MIDDLEFIELD	457	0	7	1	1	0	0	1	1	6
MIDDLETON	4847	0	82	4	33	0	0	32	43	49
MILFORD	24154	566	408	333	187	4	4	203	155	221
MILLBURY	11781	0	161	31	103	1	1	99	75	58
MILLIS	7232	0	140	6	38	0	0	64	64	102
MILLVILLE	2149	0	39	3	21	0	0	19	15	18
MILTON	25454	1	303	352	271	2	1	217	264	32
MONROE	133	0	0	0	0	0	0	0	0	0
MONSON	7600	0	94	12	54	1	1	47	66	40
MONTAGUE	8081	1	146	77	110	1	0	41	56	36

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COMMUNITY	POPULATION (1)	LIVE BIRTHS OCCURRENCE	LIVE BIRTHS RESIDENT	DEATHS OCCURRENCE	DEATHS RESIDENT	INFANT DEATHS TOTAL	INFANT DEATHS NEONATAL (2)	MARRIAGES LICENSES ISSUED (3)	MARRIAGES OCCURRENCE (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
MONTEREY	982	1	7	1	10	0	0	11	11	-3
MONTGOMERY	680	0	7	0	8	0	0	1	0	-1
MOUNT WASHINGTON	98	0	5	1	2	0	0	2	1	3
NAHANT	3849	0	51	20	39	1	0	38	65	12
NANTUCKET	6116	89	99	61	69	0	0	114	192	30
NATICK	30009	751	415	370	253	2	2	256	225	162
NEEDHAM	27158	2	343	269	284	1	1	209	168	59
NEW ASHFORD	145	0	3	0	2	0	0	0	1	1
NEW BEDFORD	96948	2132	1632	1448	1224	13	11	896	842	408
NEW BRAINTREE	696	0	9	4	6	0	0	3	1	3
NEW MARLBOROUGH	1360	0	9	4	10	0	0	2	6	-1
NEW SALEM	877	1	9	2	5	0	0	4	3	4
NEWBURY	5469	0	88	3	33	0	0	48	34	55
NEWBURYPORT	16631	846	199	311	190	2	2	177	171	9
NEWTON	81700	3030	904	662	671	1	0	699	710	233
NORFOLK	8098	0	155	143	36	0	0	54	46	119
NORTH ADAMS	16956	393	196	290	195	1	0	136	119	1
NORTH ANDOVER	23164	0	263	58	190	3	3	128	211	73
NORTH ATTLEBORO	24793	0	431	54	200	6	4	246	201	231
NORTH BROOKFIELD	4263	0	86	5	38	1	1	32	38	48
NORTH READING	11747	0	200	34	70	1	0	87	78	130
NORTHAMPTON	29111	1075	286	619	313	1	1	288	277	-27
NORTHBOROUGH	11217	1	178	42	80	1	1	87	96	98
NORTHBRIDGE	12445	0	204	75	125	2	0	95	99	79
NORTHFIELD	2448	0	38	5	22	0	0	21	33	16
NORTON	14240	2	214	43	90	1	0	93	102	124
NORWELL	9580	0	94	51	73	0	0	55	66	21
NORWOOD	27812	1163	364	657	309	6	2	319	250	55
OAK BLUFFS	2445	160	40	72	26	0	0	31	39	14
OAKHAM	1387	0	23	2	6	0	0	4	5	17
ORANGE	7499	0	103	10	83	1	1	49	59	20
ORLEANS	6344	0	53	47	78	0	0	73	87	-25

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A
VITAL EVENTS BY COMMUNITY
1988

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
OTIS	976	0	20	6	9	0	0	7	8	11
OXFORD	12322	1	175	27	88	4	4	91	99	87
PALMER	11800	0	141	110	108	0	0	112	76	33
PAXTON	3819	1	46	6	29	1	1	13	30	17
PEABODY	46047	1	644	283	409	2	1	362	370	235
PELHAM	1370	0	21	2	7	0	0	5	5	14
PEMBROKE	15193	1	239	24	86	1	1	117	102	153
PEPPERELL	10102	1	206	13	55	1	1	73	64	151
PERU	783	0	9	0	1	0	0	6	4	8
PETERSHAM	969	0	15	2	7	0	0	4	12	8
PHILLIPSTON	1073	0	20	4	8	0	0	5	16	12
PITTSFIELD	49382	1393	696	823	570	10	5	489	421	126
PLAINFIELD	475	0	3	1	4	0	0	7	8	-1
PLAINVILLE	6123	0	113	11	47	1	1	76	64	66
PLYMOUTH	41915	749	626	523	378	3	3	286	320	248
PLYMPTON	2372	0	35	1	7	0	0	15	22	28
PRINCETON	2890	0	43	4	12	0	0	14	36	31
PROVINCETOWN	3502	0	27	34	52	0	0	42	65	-25
QUINCY	81985	1076	1098	842	977	4	3	827	844	121
RANDOLPH	28497	1	405	71	287	4	3	261	252	118
RAYNHAM	9656	0	95	10	78	0	0	74	69	17
READING	22493	0	303	42	156	0	0	175	149	147
REHOBOTH	8851	0	103	10	47	1	1	56	100	56
REVERE	43927	6	656	124	459	3	1	334	302	197
RICHMOND	1630	0	15	1	10	0	0	8	8	5
ROCHESTER	4209	0	45	5	18	0	0	13	14	27
ROCKLAND	15526	1	289	70	130	2	2	121	88	159
ROCKPORT	6598	0	83	30	88	1	1	52	84	-5
ROWE	396	0	4	3	5	0	0	4	6	-1
ROWLEY	4229	0	87	18	33	0	0	33	39	54
ROYALSTON	1098	0	18	6	11	1	1	3	12	7
RUSSELL	1605	0	20	0	4	0	0	3	13	16

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A
VITAL EVENTS BY COMMUNITY
1988

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE_TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
RUTLAND	4662	0	74	16	28	0	0	27	25	46
SALEM	37689	1597	600	644	382	4	3	374	356	218
SALISBURY	7562	0	93	13	60	1	0	54	66	33
SANDISFIELD	806	0	10	3	11	0	0	7	9	-1
SANDWICH	13539	1	234	55	93	0	0	101	103	141
SAUGUS	25796	0	290	80	234	3	3	228	167	56
SAVOY	786	0	7	0	2	0	0	3	3	5
SCITUATE	17374	0	204	73	158	1	1	132	188	46
SEEKONK	12946	2	171	17	82	1	1	221	207	89
SHARON	14776	2	223	44	87	1	1	71	80	136
SHEFFIELD	2661	1	28	10	25	0	0	31	27	3
SHELBURNE	2055	1	20	21	25	1	0	17	16	-5
SHERBORN	4207	0	46	2	20	0	0	19	20	26
SHIRLEY	5783	1	83	1	38	2	1	36	34	45
SHREWSBURY	22685	0	312	73	218	5	3	151	122	94
SHUTESBURY	1280	1	15	1	6	0	0	4	5	9
SOMERSET	18126	2	157	44	193	0	0	127	124	-36
SOMERVILLE	72513	5	1044	396	780	7	4	574	414	264
SOUTH HADLEY	16676	1	151	35	143	1	1	128	152	8
SOUTHAMPTON	4589	1	47	6	24	0	0	24	14	23
SOUTHBOROUGH	6397	0	88	6	36	0	0	65	64	52
SOUTHBRIDGE	16452	617	296	271	198	2	1	191	150	98
SOUTHWICK	7873	0	104	12	50	0	0	45	40	54
SPENCER	11557	0	180	18	99	2	2	96	99	81
SPRINGFIELD	146766	6042	2902	2518	1679	38	23	1397	1306	1223
STERLING	6900	0	84	6	43	1	1	54	67	41
STOCKBRIDGE	2382	0	14	12	35	0	0	30	43	-21
STONEHAM	22621	761	314	251	200	1	1	170	131	114
STOUGHTON	27231	2156	348	455	207	2	2	222	182	141
STOW	5418	1	80	9	34	1	1	32	45	46
STURBRIDGE	7796	0	95	16	55	2	1	95	147	40
SUDBURY	14071	1	179	55	68	2	1	126	533	111

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TABLE A-4A
VITAL EVENTS BY COMMUNITY
1988

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
SUNDERLAND	2977	0	54	26	29	0	0	21	10	25
SUTTON	6724	0	88	7	39	0	0	42	69	49
SWAMPSCOTT	12803	0	164	64	168	0	0	101	130	-4
SWANSEA	15934	0	148	31	113	2	2	129	151	35
TAUNTON	46692	703	791	471	450	8	5	433	430	341
TEMPLETON	6077	0	74	23	53	0	0	41	51	21
TEWKSBURY	25643	1	412	181	170	5	4	255	176	242
TISBURY	3621	1	56	7	36	0	0	46	54	20
TOLLAND	260	0	2	0	0	0	0	0	2	2
TOPSFIELD	5554	0	56	8	38	1	1	33	69	18
TOWNSEND	8975	0	140	9	33	0	0	52	44	107
TRURO	1503	0	19	9	19	0	0	15	26	0
TYNGSBOROUGH	8168	0	173	4	33	0	0	83	23	140
TYRINGHAM	380	0	4	3	6	0	0	3	4	-2
UPTON	4279	0	74	13	38	2	1	23	20	36
UXBRIDGE	9026	2	161	10	82	1	0	57	70	79
WAKEFIELD	25024	0	320	91	232	1	1	229	221	88
WALES	1559	1	21	1	12	0	0	6	6	9
WALPOLE	20188	1	264	26	142	2	1	171	143	122
WALTHAM	57099	672	704	549	461	3	0	522	411	243
WARE	9888	159	115	109	89	1	0	73	71	26
WAREHAM	21214	475	324	264	214	2	2	143	156	110
WARREN	3974	0	65	8	42	1	1	41	27	23
WARWICK	612	0	10	1	7	0	0	4	7	3
WASHINGTON	608	0	5	10	7	0	0	5	10	-2
WATERTOWN	32971	0	343	142	376	2	1	321	246	-33
WAYLAND	12074	1	143	44	88	0	0	83	104	55
WEBSTER	15022	1	259	224	192	1	1	122	104	67
WELLESLEY	26671	1	300	103	220	1	1	176	222	80
WELLFLEET	2502	0	24	10	23	0	0	25	35	1
WENDELL	803	0	14	0	5	1	0	0	3	9
WENHAM	3809	0	37	4	35	0	0	24	31	2

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A
VITAL EVENTS BY COMMUNITY
1988

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS (2)		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL	LICENSES ISSUED (3)	OCCURRENCE (4)	
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	49941	31640
WEST BOYLSTON	6022	1	72	31	46	1	1	44	56	26
WEST BRIDGEWATER	6733	0	71	8	54	0	0	64	73	17
WEST BROOKFIELD	3401	0	48	59	38	0	0	29	48	10
WEST NEWBURY	3304	0	48	4	27	0	0	28	24	21
WEST SPRINGFIELD	26715	0	355	131	291	2	1	239	291	64
WEST STOCKBRIDGE	1294	0	22	3	15	0	0	9	18	7
WEST TISBURY	1320	0	30	6	6	0	0	26	53	24
WESTBOROUGH	13087	1	153	74	140	0	0	143	102	13
WESTFIELD	37680	2	520	483	386	5	5	325	380	134
WESTFORD	14970	0	236	19	88	1	1	90	92	148
WESTHAMPTON	1432	0	15	1	6	0	0	6	3	9
WESTMINSTER	5491	0	74	6	34	0	0	46	56	40
WESTON	10753	0	92	48	86	0	0	70	116	6
WESTPORT	14152	2	138	38	119	0	0	115	149	19
WESTWOOD	12323	0	134	18	117	0	0	104	98	17
WEYMOUTH	54576	2072	769	875	552	7	5	460	458	217
WHATELY	1379	1	22	1	9	0	0	9	11	13
WHITMAN	13879	2	211	20	104	3	2	111	104	107
WILBRAHAM	12282	0	120	44	103	0	0	87	89	17
WILLIAMSBURG	2531	0	34	0	13	0	0	16	32	21
WILLIAMSTOWN	8154	0	63	69	74	0	0	53	73	-11
WILMINGTON	17458	1	261	30	123	0	0	164	166	138
WINCHENDON	7935	0	160	18	82	2	1	72	65	78
WINCHESTER	19829	1667	232	368	186	2	1	156	197	46
WINDSOR	619	0	10	0	3	0	0	4	2	7
WINTHROP	18832	1	174	243	198	1	1	187	127	-24
WOBURN	37939	1	494	301	295	2	2	387	362	199
WORCESTER	156128	6770	2815	3412	1995	27	17	1542	1532	820
WORTHINGTON	1257	0	12	0	1	0	0	9	7	11
WRENTHAM	9124	0	121	46	62	1	0	51	47	59
YARMOUTH	20314	0	244	125	317	1	0	158	195	-73

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4B
VITAL EVENTS BY COUNTY
1988

COUNTY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES (3)	DIVORCES (3)	RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)			
STATE TOTAL	5860283	89955	88047	57024	56407	693	477	49941	17676	31640
BARNSTABLE	177407	1907	2366	2123	2292	17	8	2147	648	74
BERKSHIRE	141188	1919	1702	1617	1524	14	6	1235	464	178
BRISTOL	490518	5911	7375	4496	4940	59	45	4163	1730	2435
DUKES	11378	161	183	92	113	3	2	290	49	70
ESSEX	645672	9801	10408	6125	6484	69	50	5938	2109	3924
FRANKLIN	66619	925	986	612	711	7	2	545	237	275
HAMPDEN	441172	7579	6948	5081	4809	69	46	3646	1527	2139
HAMPSHIRE	146512	1245	1442	873	1074	6	4	1058	326	368
MIDDLESEX	1366365	19263	19673	11352	11892	120	82	11639	3997	7781
NANTUCKET	6116	89	99	61	69	0	0	192	34	30
NORFOLK	603952	6479	8093	4733	5718	51	32	5062	1311	2375
PLYMOUTH	440583	2449	6731	3146	3559	37	28	3437	1664	3172
SUFFOLK	660401	21530	11205	10059	6669	148	106	4946	1134	4536
WORCESTER	662400	10697	10836	6654	6553	93	66	5643	2446	4283

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE AND DIVORCE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

NATALITY

SECTION B

NATALITY

An eleven-year trend of increased births to Massachusetts residents continued in 1988. There were 88,047 live births to Massachusetts residents in 1988, a 4.4% increase over the 84,343 resident live births in 1987. Live births to Massachusetts residents include all births to Massachusetts residents, regardless of the state in which they occurred. Most data presented in this section are resident data. Table B-10 presents births by hospital of occurrence.

OCCURRENCE BIRTHS

In 1988, 89,955 births occurred in Massachusetts. All but 522 births occurred at the 58 hospitals with maternity units. The number of babies delivered at these hospitals ranged from 89 at Nantucket Cottage Hospital in Nantucket to 9,982 at Brigham and Women's Hospital in Boston. The median number of births per hospital was 1,182, an increase from the median number of 1,098 in 1987. The four hospitals with the largest number of births — Brigham and Women's (9,982), Bay State Medical Center (6,021), Beth Israel (5,449) and Worcester Memorial (3,559) represent almost 28% of all births occurring in Massachusetts. The distribution of Massachusetts births by hospital size is presented below. These data have shown little change in the past several years.

1988 DISTRIBUTION OF MASSACHUSETTS
OCCURRENCE BIRTHS BY HOSPITAL

NUMBER OF BIRTHS AT HOSPITAL	NO. OF HOSPITALS IN CATEGORY	TOTAL NO. OF BIRTHS IN CATEGORY	% OF TOTAL BIRTHS
<500	8	2,016	2.2
500–999	15	10,912	12.1
1000–1499	16	19,461	21.6
1500–1999	5	8,623	9.6
≥2000	14	48,421	53.8
ALL OTHER[1]		522	0.6
TOTAL	58	89,955	100.0[2]

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[1] Includes all other hospitals, birthing centers, home births and births en route to a hospital.

[2] Percents do not sum to 100.0 due to rounding.

HOME BIRTHS

What appears to be a growing public interest in home births is not reflected in the reported numbers: only 293 births, or 0.3% of all Massachusetts resident births, occurred at home. However, home births may be under-counted in the data presented. Home births, much more than hospital births, tend to be recorded as delayed records (more than one year after the event) rather than reported at the time of birth. Delayed record statistics are not included in this report.

BIRTHS BY RACE/ETHNICITY

The number of births by race/ethnicity remained relatively constant, with 80% of Massachusetts resident births occurring to white women. There are a number of points to keep in mind when analyzing 1988 data by race. In 1987, the first full year in which a new birth certificate was utilized, 1.1% of the certificates received had no information on race. In 1988, 1.3% of the birth certificates recorded had no information on race and ethnicity. Another major problem occurred with the lack of precise data on Massachusetts' Hispanic population prior to June, 1986. The question on race as asked on the certificate prior to June, 1986 was limited to a race question. In many cases, individuals with an Hispanic ethnicity appropriately selected a race code rather than responding as Hispanic. If the response was Hispanic, however, these births were formerly included in the larger category of "white". The new birth certificate collects information on both race and ethnicity and provides improved data on Hispanics. Presented below are resident birth data for calendar year 1988 utilizing maternal race and ethnicity information:

RACE AND ETHNICITY OF MOTHER
JANUARY - DECEMBER, 1988

MATERNAL RACE/ETHNICITY	TOTAL BIRTHS	% OF TOTAL
White non-Hispanic	70,417	80.0
Black non-Hispanic	6,547	7.4
Hispanic	6,593	7.5
Asian	3,127	3.6
Other	241	0.3
Unknown	1,122	1.3
TOTAL	88,047	100.0[1]

---

[1] Percents do not sum to 100.0 due to rounding.

The final point which must be considered is the method used to present data by race. On the birth certificate, information is collected on mother's race and father's race. From these two items, a race for the infant may be generated using an algorithm set by the National Center for Health Statistics.

With the exception of infant mortality data, race/ethnicity data are presented by race/ethnicity of mother. If, for example, access to prenatal care is being analyzed, the information is better presented by race of mother rather than race of infant. Although the differences in the numbers when comparing race of mother to race of infant are not substantial, the impact on statistical rates may be significant because of the relatively small percentage of births to non-whites in Massachusetts.

TEEN BIRTHS

The number of births to mothers between the ages of 15 and 19 increased from 6,923 births in 1987 to 7,113 births in 1988. This is the second consecutive year that the actual number of births to teens increased. However, the percent of teen births decreased slightly to 8.1% from 8.3% in 1987. The age-specific birth rate increased slightly from 32.0 to 34.2.

BIRTHS BY MARITAL STATUS

The proportion of unmarried mothers continued to increase to 22.2% of total births in 1988 from 20.8% in 1987. More than 78.0% of the births to women under the age of 20 were out-of-wedlock births. Births to women under the age of 20 represent 8.2% of total births, but more than 29% of the births to unmarried mothers.

BIRTHS BY AGE OF MOTHER

The largest percentage of the increase in births between the years 1987 and 1988 (63.9%) were to mothers aged 30 and older, as demonstrated below:

AGE OF MOTHER	DIFFERENCE IN BIRTHS 1987–1988	% CHANGE
<20	+241	+3.4
20–24	+87	+0.5
25–29	+1,017	+3.6
30–34	+1,389	+6.3
35–39	+912	+12.3
40–44	+66	+6.0
>44	+13	+39.4

BIRTHS BY C-SECTION

The number of Caesarean section deliveries to Massachusetts residents continued to rise from 19,918 in 1987 to 21,060 in 1988. The rate per 1,000 live births also increased from 236.2 to 239.2. The lowest rate of C-sections (when the mother's age is known) was for mothers under the age of 15 (136.0 per 1,000 live births), and the highest was for women aged 40–44 (344.3).

HOSPITAL PROFILES

The following is a synopsis of the data presented in Table B-10, Hospital Profiles, Massachusetts Occurrence Births:

- The percentage of Caesarean sections per hospital ranged from 12.8% to 37.5% of total births.
- The highest percentage of low birthweight babies was at St. Margaret's Hospital in Boston (17.1%), the lowest percentage at Quincy City Hospital in Quincy (1.4%). By race/ethnicity, the proportion of low birthweight infants by hospital had major variations. For white non-Hispanic infants, the range went from 1.4% to 17.1%; for black non-Hispanic infants, from 2.3% to 20.9% ; for Hispanic infants, from 1.3% to 22.2%; and for Asian infants, from 2.0% to 20.0%.
- Based on total occurrence births, adequate prenatal care received by mothers by hospital ranged from a low of 19.4% to a high of 95.1%. When comparing prenatal care by race per hospital, white non-Hispanic mothers received 20.9% to 95.3% adequate care; black non-Hispanic mothers received 18.6% to 91.7% adequate care; Hispanic mothers received 24.2% to 95.3% adequate care; and Asian mothers received 9.4% to 93.2% adequate care.
- When race/ethnicity is known, the highest percent of mothers who breast fed their babies occurred at Martha's Vineyard Hospital in Oak Bluffs (82.4%), and the lowest percent occurred at South Shore Hospital in Weymouth (19.7%). Statewide, 51.0% of all new mothers breast fed their babies. By known race/ethnicity, 52.2% of white, non-Hispanic mothers nursed their babies, followed by Hispanic mothers (51.7%), Asian mothers (43.8%), and black, non-Hispanic mothers (43.5%).
- The source of payment for delivery by private insurers (Blue Cross/Blue Shield, Health Maintenance Organizations, commercial insurers) showed the highest percentage at St. Joseph's Hospital in Lowell (92.7%) and the lowest percentage at Boston City Hospital in Boston (9.6%). Statewide, 73.4% of all deliveries were paid by private insurers. Private insurers paid for delivery for 81.2% of white, non-Hispanic mothers, 60.5% of Asian mothers, 42.0% of black, non-Hispanic mothers, and 28.9% of Hispanic mothers.

LOW BIRTHWEIGHT BABIES

The percent of low birthweight babies (less than 2,500 grams or five pounds eight ounces) increased from 5.7% of total births in 1987 to 6.0% in 1988 (5,270 births). The percent of low birthweight babies born to mothers under the age of 20 increased from 8.0% in 1987 to 8.3% in 1988.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

ADEQUACY OF PRENATAL CARE

The Index of Adequacy of Prenatal Care (using the Kessner Index) is a classification of prenatal care into five categories (adequate, intermediate, inadequate, no prenatal care, and unknown), based upon the trimester in which prenatal care begins and number of prenatal visits. The general classification scheme is as follows:

CATEGORY	TRIMESTER CARE BEGAN	# OF VISITS
Adequate	1	9 or more
Intermediate	1	5–8
	2	5 or more
Inadequate	1	1–4
	2	1–4
	3	1 or more
No prenatal care	—	0
Unknown	Unknown	Unknown

This classification is adjusted for gestational age to allow for proper classification of premature births.

BIRTHWEIGHT

The weight of an infant or fetus at the time of delivery. It may be recorded in either pounds/ounces or grams. If it is pounds/ounces, it is converted to grams for use in this report.

1 pound = 453.6 grams; 1,000 grams = 2 pounds, 3 ounces

BIRTHWEIGHT CATEGORIES

Normal birthweight (NBW): An infant's weight, recorded at birth, of 2,500 grams or more.

Low birthweight (LBW): An infant's weight, recorded at birth, of less than 2,500 grams.

Very low birthweight (VLBW): An infant's weight, recorded at birth, of less than 1,500 grams.

CAESAREAN SECTION or C–SECTION

Primary: A mother's first occurrence of a Caesarean section delivery.

Repeat: A Caesarean delivery which has been preceded by at least one Caesarean delivery.

ETHNICITY

See Race.

INFANT

A child whose age is less than one year (365 days).

LIVE BIRTH

A live birth is the complete expulsion or extraction from its mother of a product of conception, regardless of the duration of pregnancy, which, after separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

LOW BIRTHWEIGHT

See Birthweight Categories.

NEONATE

A child whose age is less than 28 days.

NORMAL BIRTHWEIGHT

See Birthweight Categories.

OCCURRENCE BIRTH

A birth occurring in the Commonwealth of Massachusetts, regardless of the residencies of the parents. In Massachusetts, the place will be one of the 351 cities or towns. See Resident Birth.

PARITY

The number of live births, including the present birth.

PRIMARY

See Caesarean Section.

RACE

Race of infant: For birth data presented in this publication, infant's race is derived from parent's race, according to algorithms provided by the National Center for Health Statistics. (Race on a death certificate is determined by the certifier of the death.)

Race of mother: For data presented in this publication, mother's race is as reported by the infant's mother.

Race–ethnicity: Data on race–ethnicity are available starting in June 1986, using the new birth certificate implemented on June 1, 1986. This birth certificate includes separate questions on race and ethnicity of each parent. The categories are then assigned based on a cross classification of the 38 ethnicity and 6 race codes (White, Black, Asian Indian, other Asian, American Indian, and Other). The major impact of this modification is the more precise specification of Hispanic ethnicity, resulting in a decrease in births previously classified as births to white mothers and an increase in Hispanic births.

REPEAT

See Caesarean Section.

RESIDENT BIRTH

The usual place of residence as reported by the mother. An infant's residence is considered to be that of the mother. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Vital statistics data may be presented either in terms of residence or occurrence. Unless otherwise noted, all data in this publication are resident data. Resident data include all events which occur within the state, including those which occur to non-residents. There is an interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia which provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

VERY LOW BIRTHWEIGHT

See Birthweight Categories.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC BIRTH RATE

$$\frac{\text{No. of Resident Live Births for a Specific Age of Mother}}{\text{Total Female Population of That Specific Age}} \times 1{,}000$$

CRUDE BIRTH RATE

$$\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1{,}000$$

GENERAL BIRTH RATE

$$\frac{\text{No. of Resident Live Births}}{\text{Total Female Population of Childbearing Age (15–44)}} \times 1{,}000$$

FIGURE B-1

Every day in 1988, residents of Massachusetts experienced an average of:

(241)
Births

⑭Births Weighing
<2500 Grams
(Low Birthweight)

⑲Births to Women
Aged 15 through 19

㉖Births to Women
Aged 35 or Older

(51)Births with less
than Adequate
Prenatal Care

(58)Births by
Caesarean Section

TABLE B-1
TRENDS IN NATALITY CHARACTERISTICS
MASSACHUSETTS RESIDENTS
1980-1988

		Year								
		1980	1981	1982	1983	1984	1985	1986	1987	1988
Births*		72,591	73,930	75,749	76,031	78,197	81,781	82,163	84,343	88,047
Rate per 1,000 Women aged 15-44		53.4	54.1	55.1	55.0	56.2	58.5	58.4	59.6	61.8
Race of Infant										
White	(#)	65,515	66,093	67,077	67,390	68,441	71,106	70,953	73,270	75,516
	(%)	90.2	89.4	88.6	88.6	87.5	86.9	86.4	86.9	85.8
Black	(#)	5,176	5,227	5,255	5,170	5,420	5,702	6,064	7,036	7,620
	(%)	7.1	7.1	6.9	6.8	6.9	7.0	7.4	8.3	8.6
Other	(#)	1,236	1,485	1,704	1,789	1,916	1,992	2,663	3,063	3,780
	(%)	1.7	2.0	2.2	2.4	2.4	2.4	3.2	3.6	4.3
Unknown	(#)	664	1,125	1,713	1,682	2,420	2,981	2,484	974	1,131
	(%)	0.9	1.5	2.3	2.2	3.1	3.6	3.0	1.2	1.3
Teenage Births	(#)	7,694	7,334	7,263	6,833	6,932	6,859	6,754	6,923	7,113
	(Rate)	28.1	27.7	28.3	27.5	28.8	29.5	30.1	32.0	34.2
(per 1,000 females aged 15-19)										
Low Birthweight	(#)**	4,413	4,428	4,447	4,461	4,597	4,751	4,642	4,846	5,270
	(%)	6.1	6.0	5.9	5.9	5.9	5.8	5.6	5.7	6.0
Prenatal Care	(% adequate)***	79.6	80.4	79.9	78.4	79.2	78.6	76.2	75.4	76.0

*Differences in birth numbers and rates from prior publications are the result of updating of data files and modifications of population estimates and projections.

**Low Birthweight: <2500 grams.

***Percents are based on total number of births.

TABLE B-2
AGE-SPECIFIC AND CRUDE BIRTH RATES
MASSACHUSETTS RESIDENT BIRTHS
1987-1988

Maternal Age	1987		1988		Percent Change
	Births Population*	Rate	Births Population*	Rate	
13-14	94 73,216	1.3	147 70,787	2.1	+61.5
15-19	6,923 216,225	32.0	7,113 208,068	34.2	+ 6.9
20-24	18,438 249,582	73.9	18,526 244,937	75.6	+ 2.3
25-29	28,331 266,417	106.3	29,346 268,780	109.2	+ 2.7
30-34	21,956 261,952	83.8	23,347 266,689	87.5	+ 4.4
35-39	7,405 220,812	33.5	8,317 226,754	36.7	+ 9.6
40-44	1,093 197,057	5.5	1,159 204,647	5.7	+ 3.6
Age-specific Birth Rate,+ ages 15-44	84,146 1,412,045	59.6	87,808 1,419,875	61.8	+ 3.7
Crude Birth Rate,++ per 1,000 residents	84,343 5,845,118	14.4	88,047 5,860,283	15.0	+ 4.2

*Population data are interpolations of the 1980 U.S. Bureau of the Census counts and the 1990 MISER projections.

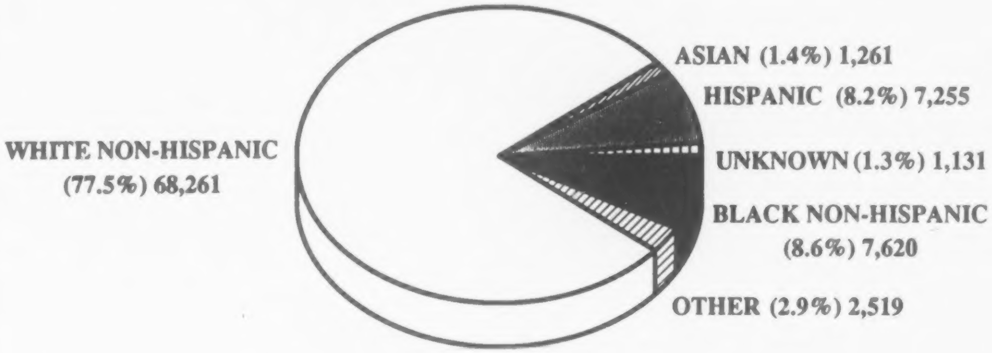
+Births per 1,000 females aged 15-44.

++Births per 1,000 residents.

FIGURE B-2

RESIDENT LIVE BIRTHS BY RACE OF INFANT*

1988

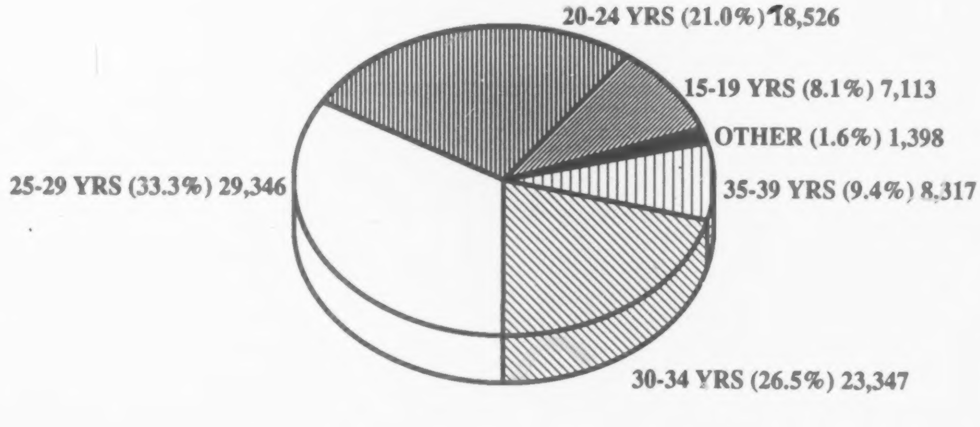


*Percents do not sum to 100.0 due to rounding.

FIGURE B-3

RESIDENT LIVE BIRTHS BY MOTHER'S AGE*

1988



*Percents do not sum to 100.0 due to rounding.

TABLE B-3
BIRTHS BY MOTHER'S AGE, RACE AND MARITAL STATUS
MASSACHUSETTS RESIDENT BIRTHS
1988

Age of Mother	Total			White non-Hispanic			Black non-Hispanic			Hispanic			Asian			Other			Unknown		
	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed
Total	88,047	68,519	19,528	70,417	59,376	11,041	6,547	2,641	3,906	6,593	3,068	3,525	3,127	2,492	635	241	144	97	1,122	798	324
Under 15	147	2	145	51	0	51	44	0	44	44	1	43	6	1	5	0	0	0	2	0	2
15	352	15	337	141	4	137	91	1	90	108	9	99	7	1	6	0	0	0	5	0	5
16	732	69	663	389	35	354	123	5	118	184	24	160	16	3	13	4	0	4	16	2	14
17	1,450	182	1,268	823	113	710	232	11	221	323	47	276	40	3	37	3	0	3	29	8	21
18	2,068	428	1,640	1,318	313	1,005	287	18	269	344	77	267	68	14	54	17	1	16	34	5	29
19	2,511	863	1,648	1,645	626	1,019	269	33	236	465	145	320	70	33	37	15	5	10	47	21	26
20-24	18,526	11,658	6,868	13,542	9,596	3,946	1,839	529	1,310	2,250	974	1,276	590	388	202	65	33	32	240	138	102
25-29	29,346	25,242	4,104	24,365	22,100	2,265	1,857	914	943	1,686	1,001	685	1,019	887	132	70	51	19	349	289	60
30-34	23,347	21,397	1,950	20,011	18,955	1,056	1,250	767	483	847	569	278	920	840	80	47	39	8	272	227	45
35-39	8,317	7,582	735	7,106	6,705	401	479	321	158	279	179	100	324	268	56	18	14	4	111	95	16
40-44	1,159	1,014	145	960	875	85	68	41	27	56	38	18	58	47	11	1	1	0	16	12	4
45+	46	36	10	30	25	5	1	0	1	6	4	2	8	6	2	0	0	0	1	1	0
Unknown	46	31	15	36	29	7	7	1	6	1	0	1	1	1	0	1	0	1	0	0	0

TABLE B-4
RESIDENT BIRTHS TO TEENAGE MOTHERS
1970-1988

YEAR	TOTAL BIRTHS	AGE OF MOTHER									
		12	13	14	15	16	17	18	19	TOTAL 12-19	% OF TOTAL BIRTHS
1970	93,582	3	8	70	320	802	1,726	3,043	4,285	10,257	11.0
1971	86,755	3	23	84	313	875	1,738	2,981	4,000	10,017	11.5
1972	76,835	1	20	103	348	955	1,841	2,834	3,690	9,792	12.7
1973	72,237	0	12	93	393	959	1,759	2,584	3,282	9,082	12.6
1974	70,071	2	16	79	333	895	1,762	2,524	3,181	8,792	12.5
1975	68,070	2	18	84	325	915	1,678	2,560	3,085	8,667	12.7
1976	65,947	7	12	96	336	807	1,478	2,332	2,923	7,991	12.1
1977	67,838	1	18	68	270	792	1,477	2,293	2,913	7,832	11.5
1978	68,526	3	15	67	303	737	1,445	2,252	2,979	7,801	11.4
1979	70,568	2	9	70	283	773	1,413	2,306	2,916	7,772	11.0
1980	72,591	1	14	56	300	740	1,360	2,202	3,092	7,765	10.7
1981	73,931	1	12	82	275	722	1,357	2,164	2,816	7,429	10.0
1982	75,749	1	14	83	299	753	1,328	2,161	2,722	7,361	9.7
1983	76,031	0	8	78	255	726	1,278	2,053	2,521	6,919	9.1
1984	78,198	1	8	75	265	714	1,307	2,061	2,585	7,016	9.0
1985	81,776	4	12	97	295	698	1,283	1,986	2,595	6,970	8.5
1986	82,163	0	15	82	334	712	1,233	1,954	2,521	6,851	8.3
1987	84,343	2	15	79	327	796	1,337	1,965	2,498	7,019	8.3
1988	88,047	0	27	120	352	732	1,450	2,068	2,511	7,260	8.2

TABLE B-5
BIRTHS BY BIRTHWEIGHT, MATERNAL RACE AND ETHNICITY
MASSACHUSETTS RESIDENT BIRTHS
1988

Birthweight (in grams)	Total		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other		Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
STATE TOTAL	88,047	100.0	70,417	100.0	6,547	100.0	6,593	100.0	3,127	100.0	241	100.0	1,122	100.0
< 500	107	0.1	66	0.1	21	0.3	11	0.2	4	**	0	**	5	0.4
500 - 999	390	0.4	245	0.3	82	1.2	47	0.7	9	0.3	2	**	5	0.4
1,000-1,499	479	0.5	302	0.4	90	1.4	54	0.8	24	0.8	7	2.9	2	**
VLBW*(0-1,499)	976	1.1	613	0.9	193	3.0	112	1.7	37	1.2	9	3.7	12	1.1
1,500-1,999	992	1.1	679	1.0	165	2.5	90	1.4	40	1.3	5	2.1	13	1.2
2,000-2,499	3,297	3.7	2,318	3.3	457	7.0	321	4.9	151	4.8	13	5.4	37	3.3
LBW*+(0-2,499)	5,265	6.0	3,610	5.1	815	12.4	523	7.9	228	7.3	27	11.2	62	5.5
2,500-2,999	13,012	14.8	9,312	13.2	1,490	22.8	1,273	19.3	725	23.2	37	15.4	175	15.6
3,000-3,499	30,990	35.2	24,271	34.5	2,390	36.5	2,534	38.4	1,326	42.4	88	36.5	381	33.9
3,500-3,999	27,476	31.2	23,300	33.1	1,377	21.0	1,715	26.0	684	21.9	63	26.1	337	30.0
4,000-4,499	9,140	10.4	8,054	11.4	380	5.8	452	6.8	140	4.5	21	8.7	93	8.3
4,500-4,999	1,668	1.9	1,509	2.1	53	0.8	70	1.1	12	0.4	4	**	20	1.8
5,000+	196	0.2	178	0.2	6	0.1	6	0.1	3	**	0	**	3	**
Unknown	300	0.3	183	0.3	36	0.6	20	0.3	9	0.3	1	**	51	4.5

**Calculations based on fewer than 5 events are excluded.

*VLBW: very low birthweight

*+LBW: low birthweight

TABLE B-6
NATALITY CHARACTERISTICS BY MATERNAL RACE AND ETHNICITY
MASSACHUSETTS RESIDENT BIRTHS
1988

	Total Births	Teenage Births		Birthweight*		Adequate Prenatal Care+	First Trimester Prenatal Care++	Prenatal Care Visits
		<18 yrs	<20 yrs	Very Low	Low			
Maternal Race and Ethnicity	Number	%	%	%	%	%	%	Average Number
STATE TOTAL	88,047	3.0	8.2	1.1	6.0	78.8	80.8	11.5
WHITE NON-HISPANIC	70,417	2.0	6.2	0.9	5.1	82.4	84.9	11.7
BLACK NON-HISPANIC	6,547	7.5	16.0	3.0	12.4	60.1	60.2	10.0
Haitian	919	1.1	3.0	2.7	8.9	65.4	63.5	10.4
Other Black non-Hispanic	5,628	8.5	18.1	3.0	13.0	59.3	59.6	10.0
HISPANIC	6,593	10.0	22.3	1.7	7.9	62.4	64.7	10.5
Puerto Rican	4,040	13.8	29.4	1.6	8.9	58.6	61.1	10.4
Dominican	903	3.9	10.8	1.4	5.5	64.4	67.8	10.7
Central American	571	5.2	11.9	2.4	7.4	65.9	66.7	10.4
Other Hispanic	1,079	3.5	10.6	1.8	6.7	73.1	74.3	11.0
ASIAN	3,127	2.2	6.6	1.2	7.3	67.1	68.4	10.8
Southeast Asian	1,052	4.8	13.4	1.0	8.5	44.9	47.7	9.6
Chinese	867	**	**	**	4.7	80.6	80.7	11.5
Other Asian	1,208	1.6	5.1	1.8	8.1	76.9	77.6	11.2
OTHER	241	2.9	16.2	3.7	11.2	64.6	61.8	10.2
UNKNOWN	1,122	4.6	11.8	1.1	5.5	80.4	77.8	11.3

*Very low birthweight: <1,500 grams.
Low birthweight: <2,500 grams.

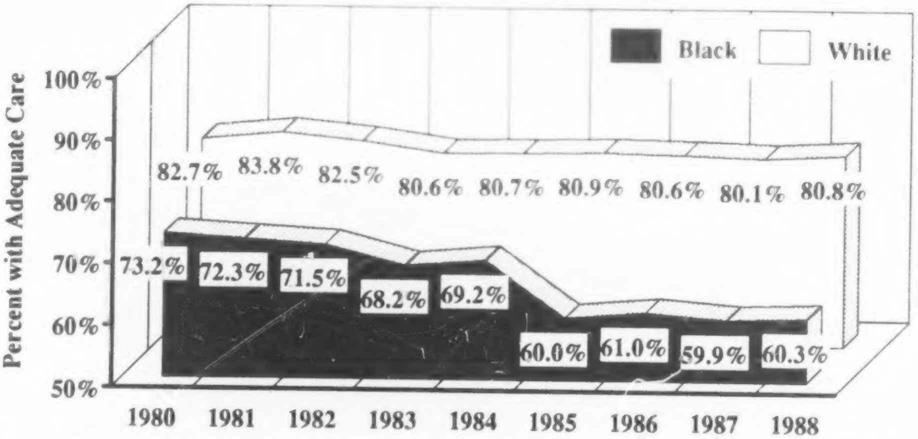
**Calculations based on fewer than 5 events are excluded.

+Calculations are based on births with known adequacy of prenatal care scores.

++Mothers who registered for prenatal care during the first trimester and had nine or more prenatal care visits.

FIGURE B-4

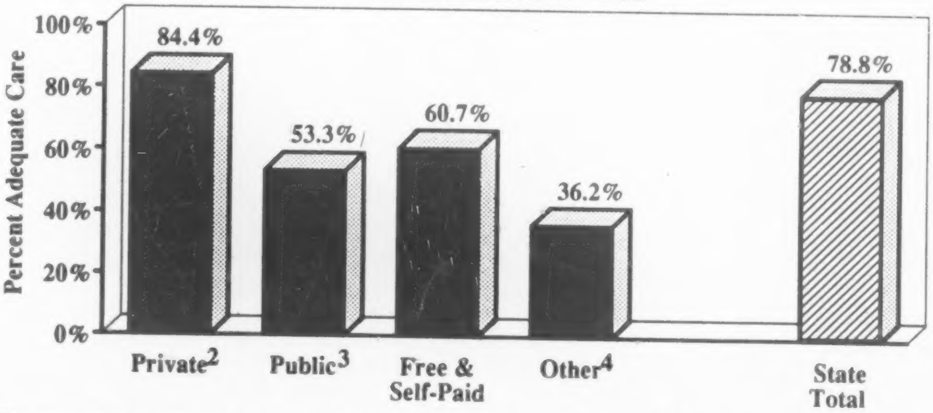
TRENDS IN ADEQUACY OF PRENATAL CARE [1]
by Maternal Race [2]
Massachusetts: 1980-1988



1. Calculations are based on births with known adequacy of prenatal care scores, using the Kessner adequacy index.
2. When calculating statistics which include data before June 1986, the race classifications do not include an ethnicity component; most Hispanics are included in the race category of white.

FIGURE B-5

ADEQUACY OF PRENATAL CARE
by Prenatal Care Source of Payment [1]
Massachusetts: 1988



1. The source of payment for prenatal care is a self-reported item on the birth certificate. As with all such data, they are subject to the limitations of self-reported information and should be interpreted with the usual caution.
2. Private: Blue Cross/Blue Shield, Commercial Insurers and Health Maintenance Organizations.
3. Public: Medicaid, Medicare, Healthy Start and Other Government.
4. Other: Worker's Compensation and Other.

TABLE B-7
PARITY* BY AGE OF MOTHER
MASSACHUSETTS RESIDENT BIRTHS
1988

Age of Mother		Total	1st	2nd	3rd	4th	5th	6th	7th	8th	≥9th	Unknown
Total	N	88,047	39,089	28,517	12,937	4,029	1,307	428	182	91	81	1,386
	%	100.00	44.39	32.39	14.70	4.58	1.48	0.49	0.21	0.10	0.09	1.57
10-14	N	147	141	5	--	--	--	--	--	--	--	1
	%	0.17	0.16	0.01								**
15-19	N	7,113	5,575	1,164	198	34	1	--	--	--	--	141
	%	8.08	6.33	1.32	0.22	0.04	**					0.16
20-24	N	18,526	9,943	5,699	1,932	492	116	23	6	2	1	312
	%	21.04	11.29	6.47	2.19	0.59	0.13	0.03	0.01	**	**	0.35
25-29	N	29,346	13,107	9,893	4,206	1,185	361	107	33	14	4	436
	%	33.33	14.89	11.24	4.78	1.35	0.41	0.12	0.04	0.02	**	0.50
30-34	N	23,347	7,766	8,551	4,587	1,394	432	159	60	29	18	351
	%	26.52	8.82	9.71	5.21	1.58	0.49	0.18	0.07	0.03	0.02	0.40
35-39	N	8,317	2,235	2,853	1,773	796	318	105	57	30	29	121
	%	9.45	2.54	3.24	2.01	0.90	0.36	0.12	0.06	0.03	0.03	0.14
40-44	N	1,159	294	331	226	121	73	30	22	15	26	21
	%	1.32	0.33	0.38	0.26	0.14	0.08	0.03	0.02	0.02	0.03	0.02
≥45	N	46	8	9	10	3	4	3	3	1	3	2
	%	0.05	0.01	0.01	0.01	**	**	**	**	**	**	**
Unknown Age	N	46	20	12	5	4	2	1	1	--	--	1
	%	0.05	0.02	0.01	0.01	**	**	**	**			**

*The number of live births including this birth.

**Percentage less than 0.01%. All percentages are based on total births.

--Indicates zero events.

TABLE B-8
NUMBER OF PRIMARY AND REPEAT CAESAREAN SECTIONS BY AGE
MASSACHUSETTS RESIDENT BIRTHS
1988

				Primary		Repeat	
Age of Mother	Total Caesarean Deliveries	Total Births	Rate per 1,000 Live Births	Caesarean Deliveries	Percent of Total Caesarean	Caesarean Deliveries	Percent of Total Caesarean
Total	21,060	88,047	239.2	13,188	62.6%	7,372	37.4%
<15	20	147	136.0	20	100.0	--	--
15-19	1,138	7,113	160.0	983	86.4	155	13.6
20-24	3,883	18,526	209.6	2,697	69.5	1,186	30.5
25-29	6,997	29,346	238.4	4,426	63.3	2,571	36.7
30-34	6,106	23,347	261.5	3,406	55.8	2,700	44.2
35-39	2,501	8,317	300.7	1,403	56.1	1,098	43.9
40-44	399	1,159	344.3	242	60.6	157	39.4
>45	13	46	282.6	9	69.2	4	30.8
Unknown	3	46	65.2	2	66.7	1	33.3

TABLE B-9
BIRTHWEIGHT IN GRAMS BY AGE OF MOTHER
NUMBER AND RATE PER THOUSAND LIVE BIRTHS
MASSACHUSETTS RESIDENT BIRTHS
1988

Birthweight (in grams)		Age of Mother												
		Total	<15	15	16	17	18	19	20-24	25-29	30-34	35-39	40-44	≥45	Unknown
Total	#	88,047	147	352	732	1,450	2,068	2,511	18,526	29,346	23,347	8,317	1,159	46	46
<500	#	112	1	1	2	1	4	4	26	31	31	10	1	--	--
	Rate	1.3	6.8	2.8	2.7	0.7	1.9	1.6	1.4	1.1	1.3	1.2	0.9	--	--
500-999	#	390	3	3	7	10	19	11	89	110	94	35	7	1	1
	Rate	4.4	20.4	8.5	9.6	6.9	9.2	4.4	4.8	3.8	4.0	4.2	6.0	21.7	21.7
1000-1499	#	479	1	2	12	12	23	20	103	125	111	54	11	--	5
	Rate	5.4	6.8	5.7	16.4	8.3	11.1	8.0	5.6	4.3	4.8	6.5	9.5	--	108.7
VLBW*	#	981	5	6	21	23	46	35	218	266	236	99	19	1	6
	Rate	11.1	34.0	17.0	28.7	15.9	22.2	13.9	11.8	9.1	10.1	11.9	16.4	21.7	130.4
1500-1999	#	992	5	5	5	24	28	35	203	308	241	119	18	1	--
	Rate	11.3	34.0	14.2	6.8	16.6	13.5	13.9	11.0	10.5	10.3	14.3	15.5	21.7	--
2000-2499	#	3,297	10	19	46	76	105	108	803	1,011	746	332	40	--	1
	Rate	37.4	68.0	54.0	62.8	52.4	50.8	43.0	43.3	34.4	32.0	39.9	34.5	--	21.7
LBW**	#	5,270	20	30	72	123	179	178	1,224	1,585	1,223	550	77	2	7
	Rate	59.8	136.0	85.2	98.4	84.8	86.6	70.9	66.1	54.0	52.4	66.1	66.4	43.5	152.2
2500-2999	#	13,012	39	86	170	313	422	490	3,117	4,098	3,027	1,058	177	10	5
	RATE	147.8	265.3	244.3	232.2	215.9	204.1	195.1	168.2	139.6	129.6	127.2	152.7	217.4	108.7
3000-3499	#	30,990	43	132	285	551	779	962	6,835	10,292	7,995	2,703	384	11	18
	Rate	352.0	292.5	375.0	389.3	380.0	376.7	383.1	368.9	350.7	342.4	325.0	331.3	239.1	391.3
3500-3999	#	27,476	34	79	165	352	513	678	5,315	9,510	7,740	2,719	342	17	12
	Rate	312.1	231.3	224.4	225.4	242.8	248.1	270.0	286.9	324.1	331.5	326.9	295.1	369.6	260.9
4000-4499	#	9,140	8	21	34	92	146	153	1,641	3,186	2,683	1,031	138	5	2
	Rate	103.8	54.4	59.7	46.4	63.4	70.6	60.9	88.6	108.6	114.9	124.0	119.1	108.7	43.5
4500-4999	#	1,668	1	2	3	15	19	33	288	536	533	206	31	1	--
	Rate	18.9	6.8	5.7	4.1	10.3	9.2	13.1	15.5	18.3	22.8	24.8	26.7	21.7	--
5000-8164	#	196	--	--	1	--	1	--	38	61	62	28	5	--	--
	Rate	2.2	--	--	1.4	--	0.5	--	2.0	2.1	2.7	3.4	4.3	--	--
Unknown***	#	295	2	2	2	4	9	17	68	78	84	22	5	--	2
	Rate	3.4	13.6	5.7	2.7	2.8	4.4	6.8	3.7	2.7	3.6	2.6	4.3	--	43.5

*VLBW--very low birthweight (0-1499 grams)

**LBW--low birthweight (0-2499 grams)

***Unknown includes birthweights greater than 8164 grams.

--Indicates zero events.

TECHNICAL NOTES FOR TABLE B-10
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

The figures in the ''Occurrence Births'' column for each of the 58 birthing hospitals indicate the total number of births that occurred on a hospital-by-hospital basis as reported to the Massachusetts Department of Public Health. Percents shown in this column indicate the percentage of the total Massachusetts births occurring at each hospital.

Each race category within an individual hospital should be regarded as a separate entity. Example: Bay State Medical Center reported 6,021 occurrence births in 1988. Of these, 70.7% were to white, non-Hispanic women, 11.5% were to black, non-Hispanic women, 15.7% were to Hispanic women, etc. Of the 70.7% of births to white, non-Hispanic mothers, 26.9% of these babies were delivered by Caesarean Section (713 primary C-Section deliveries and 423 repeat C-Section deliveries).

The percent of low birthweight (less than 2,500 grams) babies born to white, non-Hispanic mothers was 7.5%, and 76.3% of white, non-Hispanic mothers at Bay State Medical Center received adequate prenatal care. The adequacy of prenatal care variable is based on two factors: the month a woman registers for prenatal care and the total number of visits for prenatal care. Please refer to the definitions at the beginning of this section for further explanation.

In addition, of the white, non-Hispanic mothers who gave birth at Bay State Medical Center, 52.4% breast-fed their babies and 79.4% paid for their babies' deliveries by private insurer (Blue Cross/Blue Shield, etc.).

Although St. Vincent's Hospital in Worcester accounted for only 2.4% of total 1988 occurrence births, this hospital accounted for almost 52% of births reported with unknown maternal race. By way of comparison, the next highest percentage of births showing unknown maternal race occurred at South Shore Hospital in Weymouth. South Shore Hospital, while accounting for 2.3% of total 1988 occurrence births, had 9.4% of the statewide births with unknown maternal race.

Additional Notes:

1. Percents may not sum to 100.0 due to rounding.

2. --Zero events are indicated by dashes.

3. Calculations based on fewer than 10 births per race category in all columns other than Method of Delivery are indicated by ''**'' across the entire row. In these cases, only the percent of births by race of mother is shown.

4. Calculations based on 15 or fewer Caesarean-section births per race category are indicated by ''**'' in the three Method of Delivery columns.

TABLE B-10
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean										
					% Total	# Primary	# Repeat				% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
Addison Gilbert	Gloucester	270 0.3%	TOTAL	100.0%	32.2%	54	33	4.4%	81.1%	43.3%	72.6%	25.9%	1.5%	--	--
			White, non-Hisp.	97.4	31.9	51	33	4.6	81.4	43.3	73.8	24.7	1.5	--	--
			Black, non-Hisp.	0.4	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	0.7	**	**	**	**	**	**	**	**	**	**	**
			Asian	1.5	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Anna Jaques	Newburyport	844 0.9%	TOTAL	100.0%	19.2%	91	71	3.2%	83.5%	57.6%	80.8%	13.5%	4.5%	0.9%	0.2%
			White, non-Hisp.	97.5	18.8	88	67	3.2	83.7	57.6	81.2	13.4	4.4	1.0	0.1
			Black, non-Hisp.	0.4	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.1	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.7	**	**	**	**	**	**	**	**	**	**	**
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.2	**	**	**	**	**	**	**	**	**	**	**
Atlanticare Medical Center	Lynn	976 1.1%	TOTAL	100.0%	25.6%	149	101	5.1%	69.8%	31.5%	55.9%	38.7%	2.2%	2.9%	0.3%
			White, non-Hisp.	75.5	27.4	121	81	4.7	77.2	32.8	67.6	27.1	1.8	3.3	0.3
			Black, non-Hisp.	8.3	24.7	12	8	11.1	45.7	24.7	21.0	75.3	2.5	1.2	--
			Hispanic	7.4	23.6	8	9	1.4	45.8	43.1	16.7	77.8	4.2	1.4	--
			Asian	7.6	**	**	**	6.8	47.3	12.2	17.6	78.4	1.4	2.7	--
			Other	0.3	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.9	**	**	**	**	**	**	**	**	**	**	**
Bay State Medical Center	Springfield	6,021 6.7%	TOTAL	100.0%	25.5%	910	612	8.7%	68.6%	47.2%	64.3%	32.5%	2.5%	0.2%	0.6%
			White, non-Hisp.	70.7	26.9	713	423	7.5	76.3	52.4	79.4	17.4	2.5	0.2	0.5
			Black, non-Hisp.	11.5	23.4	81	79	12.8	47.6	29.8	34.2	63.5	1.4	0.3	0.6
			Hispanic	15.7	21.6	101	101	11.1	49.6	36.2	19.4	77.7	2.2	0.1	0.5
			Asian	1.4	**	**	**	8.0	64.4	58.6	58.6	27.6	12.6	--	1.1
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.5	**	**	**	21.4	78.6	10.7	57.1	28.6	--	3.6	10.7
Berkshire Medical Center	Pittsfield	1,390 1.5%	TOTAL	100.0%	25.1%	226	123	5.5%	70.7%	59.2%	78.6%	17.8%	2.7%	0.7%	0.2%
			White, non-Hisp.	96.5	24.7	213	118	5.3	71.6	59.8	79.5	16.8	2.8	0.7	0.2
			Black, non-Hisp.	1.9	**	**	**	14.8	37.0	18.5	48.1	51.9	--	--	--
			Hispanic	0.7	**	**	**	--	70.0	70.0	70.0	30.0	--	--	--
			Asian	0.8	**	**	**	18.2	45.5	72.7	54.5	45.5	--	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Beth Israel	Boston	5,449 6.1%	TOTAL	100.0%	22.1%	800	404	5.9%	71.2%	62.3%	77.2%	18.3%	1.4%	0.8%	2.3%
			White, non-Hisp.	67.4	23.7	582	289	4.7	78.6	70.7	90.3	6.5	0.9	0.5	1.8
			Black, non-Hisp.	16.0	20.3	112	64	11.0	49.0	48.0	44.4	49.8	1.1	1.7	3.0
			Hispanic	4.5	19.1	26	21	5.7	57.1	68.8	52.6	39.7	2.0	--	5.7
			Asian	10.3	16.2	65	26	5.3	65.2	28.9	56.7	35.1	4.8	1.4	2.0
			Other	0.3	**	**	**	--	50.0	55.6	50.0	38.9	--	--	11.1
			Unknown	1.4	**	**	**	7.7	59.0	44.9	59.0	28.2	1.3	1.3	10.3

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean										
					% Total	# Primary	# Repeat				% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
Beverly	Beverly	1,361	TOTAL	100.0%	24.2%	223	107	2.9%	87.8%	67.5%	90.2%	7.1%	1.9%	0.7%	--
		1.5%	White, non-Hisp.	96.5	24.0	214	101	2.9	88.1	67.3	90.5	6.8	2.0	0.8	--
			Black, non-Hisp.	0.9	**	**	**	8.3	66.7	58.3	83.3	16.7	--	--	--
			Hispanic	1.1	**	**	**	6.7	80.0	73.3	66.7	33.3	--	--	--
			Asian	1.4	**	**	**	--	84.2	78.9	94.7	5.3	--	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Boston City	Boston	1,485	TOTAL	100.0%	18.0%	167	93	13.5%	19.4%	38.8%	9.6%	77.4%	6.5%	4.7%	1.8%
		1.6%	White, non-Hisp.	14.8	17.8	20	18	13.2	20.9	23.2	13.2	65.9	10.5	7.7	2.7
			Black, non-Hisp.	67.1	17.7	119	53	14.3	18.6	38.5	9.6	78.9	6.0	4.3	1.1
			Hispanic	15.0	19.4	23	20	10.8	24.2	57.4	6.3	85.2	4.0	2.7	1.8
			Asian	2.2	**	**	**	9.4	9.4	28.1	12.5	68.7	12.5	--	6.2
			Other	0.5	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.3	**	**	**	**	**	**	**	**	**	**	**
Brigham and Women's	Boston	9,982	TOTAL	100.0%	27.3%	1,782	936	11.0%	91.7%	66.5%	79.8%	14.0%	4.6%	0.2%	1.5%
		11.1%	White, non-Hisp.	67.9	28.8	1,266	685	10.2	94.6	69.9	90.6	4.6	2.8	0.2	1.8
			Black, non-Hisp.	16.5	24.3	279	122	15.5	83.1	51.3	62.7	31.0	5.1	0.3	0.9
			Hispanic	10.6	24.8	159	102	10.3	86.2	64.4	35.2	50.1	13.8	0.2	0.8
			Asian	4.4	20.9	68	24	8.9	92.0	75.9	86.1	6.8	5.7	--	1.4
			Other	0.6	**	**	**	8.8	91.2	70.2	57.9	24.6	17.5	--	--
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Brockton	Brockton	1,203	TOTAL	100.0%	16.6%	126	74	4.6%	51.5%	42.2%	72.5%	24.1%	2.2%	0.6%	0.7%
		1.3%	White, non-Hisp.	87.7	17.4	115	69	4.4	54.4	43.5	77.7	19.5	1.9	0.6	0.3
			Black, non-Hisp.	7.4	**	**	**	6.7	28.1	33.7	37.1	55.1	4.5	1.1	2.2
			Hispanic	2.7	**	**	**	6.2	37.5	34.4	28.1	68.7	3.1	--	--
			Asian	1.3	**	**	**	--	43.7	37.5	56.2	37.5	6.2	--	--
			Other	0.4	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.5	**	**	**	**	**	**	**	**	**	**	**
Burbank	Fitchburg	1,071	TOTAL	100.0%	12.8%	93	44	2.6%	42.3%	58.2%	64.1%	30.5%	2.1%	2.9%	0.4%
		1.2%	White, non-Hisp.	86.1	13.3	86	37	2.4	44.3	60.4	70.0	25.1	2.0	2.7	0.3
			Black, non-Hisp.	4.0	**	**	**	--	23.3	39.5	20.9	67.4	2.3	9.3	--
			Hispanic	7.1	**	**	**	3.9	31.6	50.0	27.6	68.4	3.9	--	--
			Asian	2.8	**	**	**	10.0	36.7	36.7	40.0	50.0	--	6.7	3.3
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Cambridge City	Cambridge	674	TOTAL	100.0%	14.8%	55	45	5.5%	54.9%	42.3%	35.2%	55.0%	7.9%	1.5%	0.4%
		0.8%	White, non-Hisp.	48.4	14.4	25	22	4.3	59.5	24.2	45.4	46.0	7.1	1.2	0.3
			Black, non-Hisp.	22.3	18.7	13	15	5.3	49.3	60.0	39.3	49.3	9.3	1.3	0.7
			Hispanic	18.7	13.5	10	7	9.5	54.8	73.0	15.9	75.4	8.7	--	--
			Asian	10.1	**	**	**	4.4	47.1	33.8	14.7	73.5	7.4	4.4	--
			Other	0.3	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.3	**	**	**	**	**	**	**	**	**	**	**

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

					Method of Delivery						Delivery Method of Payment				
					Caesarean										
Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		% Total	# Primary	# Repeat	% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	% Private	% Government Assistance	% Free & Self Paid	% Other	Unknown
Cape Cod	Barnstable	1,267	TOTAL	100.0%	27.8%	218	134	3.2%	72.3%	54.4%	69.5%	25.7%	4.3%	0.3%	0.2%
		1.4%	White, non-Hisp.	93.2	27.6	199	127	2.9	73.8	54.9	72.4	22.6	4.4	0.3	0.3
			Black, non-Hisp.	2.8	**	**	**	--	45.7	31.4	20.0	74.3	5.7	--	--
			Hispanic	3.2	40.0	11	5	7.5	55.0	67.5	30.0	70.0	--	--	--
			Asian	0.5	**	**	**	**	**	**	**	**	**	**	**
			Other	0.4	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Charlton Memorial	Fall River	2,048	TOTAL	100.0%	22.4%	283	176	5.6%	66.4%	21.1%	70.8%	25.8%	1.6%	1.5%	0.3%
		2.3%	White, non-Hisp.	96.7	22.6	274	173	5.6	67.0	21.2	71.8	24.6	1.6	1.6	0.4
			Black, non-Hisp.	1.1	**	**	**	18.2	45.5	31.8	36.4	63.6	--	--	--
			Hispanic	0.8	**	**	**	5.9	58.8	17.6	47.1	52.9	--	--	--
			Asian	1.3	**	**	**	--	42.3	11.5	30.8	69.2	--	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Cooley Dickenson	Northampton	1,072	TOTAL	100.0%	24.9%	184	83	2.3%	81.4%	68.4%	78.1%	15.5%	2.5%	0.2%	3.7%
		1.2%	White, non-Hisp.	89.0	24.4	160	73	2.0	83.9	68.6	78.9	14.3	2.4	0.2	4.2
			Black, non-Hisp.	1.8	**	**	**	5.3	42.1	73.7	68.4	26.3	5.3	--	--
			Hispanic	3.0	**	**	**	9.4	53.1	59.4	43.7	56.2	--	--	--
			Asian	4.9	**	**	**	3.8	66.0	66.0	83.0	11.3	5.7	--	--
			Other	0.3	**	**	**	**	**	**	**	**	**	**	**
			Unknown	1.0	**	**	**	--	90.9	81.8	100.0	--	--	--	--
Emerson	Concord	2,022	TOTAL	100.0%	18.8%	232	149	2.9%	93.0%	77.4%	87.0%	11.0%	1.5%	0.1%	0.3%
		2.2%	White, non-Hisp.	93.4	18.7	213	141	2.6	93.7	77.7	88.6	9.4	1.5	0.2	0.4
			Black, non-Hisp.	1.7	**	**	**	11.4	77.1	57.1	25.7	74.3	--	--	--
			Hispanic	1.5	**	**	**	6.5	80.6	74.2	58.1	35.5	6.5	--	--
			Asian	3.3	**	**	**	6.1	87.9	80.3	87.9	10.6	1.5	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Fairview	Great Barrington	121	TOTAL	100.0%	21.5%	12	14	3.3%	71.1%	57.0%	67.8%	22.3%	9.1%	0.8%	--
		0.1%	White, non-Hisp.	96.7	22.2	12	14	3.4	72.6	55.6	67.5	22.2	9.4	0.9	--
			Black, non-Hisp.	--	--	--	--	--	--	--	--	--	--	--	--
			Hispanic	2.5	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.8	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Falmouth	Falmouth	627	TOTAL	100.0%	31.6%	132	66	4.0%	38.1%	58.7%	58.9%	35.2%	4.1%	1.0%	0.8%
		0.7%	White, non-Hisp.	91.2	31.3	118	61	4.0	37.6	60.5	61.7	32.2	4.4	0.9	0.9
			Black, non-Hisp.	4.6	**	**	**	3.4	44.8	37.9	31.0	62.1	3.4	3.4	--
			Hispanic	1.8	**	**	**	--	27.3	45.5	45.5	54.5	--	--	--
			Asian	0.5	**	**	**	**	**	**	**	**	**	**	**
			Other	1.8	**	**	**	--	63.6	45.5	18.2	81.8	--	--	--
			Unknown	0.2	**	**	**	**	**	**	**	**	**	**	**

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean										
					% Total	# Primary	# Repeat				% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
Framingham Union	Framingham	2,133	TOTAL	100.0%	26.4%	335	229	4.2%	87.4%	47.2%	86.3%	8.6%	2.1%	0.4%	2.6%
		2.4%	White, non-Hisp.	89.8	26.5	294	213	3.7	89.4	46.8	89.0	6.8	1.8	0.3	2.1
			Black, non-Hisp.	1.2	**	**	**	15.4	69.2	46.2	69.2	26.9	--	3.8	--
			Hispanic	5.3	30.4	22	12	7.1	70.5	50.9	54.5	33.0	7.1	1.8	3.6
			Asian	2.9	24.2	13	2	8.1	77.4	62.9	85.5	8.1	3.2	1.6	1.6
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.8	**	**	**	11.1	38.9	5.6	22.2	16.7	--	--	61.1
Franklin Medical Center	Greenfield	914	TOTAL	100.0%	19.5%	108	70	3.1%	79.6%	61.4%	71.4%	24.0%	3.0%	1.3%	0.3%
		1.0%	White, non-Hisp.	98.1	19.3	105	68	3.1	79.6	61.2	71.9	23.4	3.0	1.3	0.3
			Black, non-Hisp.	0.1	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.2	**	**	**	--	72.7	72.7	45.5	54.5	--	--	--
			Asian	0.3	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.2	**	**	**	**	**	**	**	**	**	**	**
Goddard Memorial	Stoughton	2,155	TOTAL	100.0%	23.2%	325	175	3.2%	57.8%	42.3%	69.3%	26.3%	2.4%	0.2%	1.9%
		2.4%	White, non-Hisp.	84.0	23.2	268	152	3.2	61.8	42.8	74.3	21.3	2.4	0.2	1.7
			Black, non-Hisp.	10.1	23.5	36	15	2.8	37.3	37.8	47.5	46.5	3.2	--	2.8
			Hispanic	4.0	23.0	14	6	4.6	34.5	37.9	19.5	79.3	--	--	1.1
			Asian	1.3	**	**	**	--	39.3	57.1	75.0	17.9	3.6	--	3.6
			Other	0.5	**	**	**	--	20.0	40.0	40.0	50.0	--	--	10.0
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Hale	Haverhill	701	TOTAL	100.0%	20.4%	85	58	4.7%	73.5%	44.8%	59.1%	35.7%	3.9%	1.1%	0.3%
		0.8%	White, non-Hisp.	87.3	20.3	80	44	4.4	76.1	45.3	62.3	32.8	3.6	1.0	0.3
			Black, non-Hisp.	0.7	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	10.0	**	**	**	4.3	54.3	42.9	31.4	61.4	4.3	2.9	--
			Asian	1.7	**	**	**	8.3	58.3	16.7	66.7	25.0	8.3	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.3	**	**	**	**	**	**	**	**	**	**	**
Harrington Memorial	Southbridge	615	TOTAL	100.0%	24.1%	99	49	4.1%	67.0%	41.1%	62.0%	33.0%	3.3%	1.8%	--
		0.7%	White, non-Hisp.	89.3	23.7	88	42	3.8	68.3	41.9	66.7	27.7	3.6	2.0	--
			Black, non-Hisp.	0.3	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	9.3	31.6	11	7	7.0	56.1	33.3	17.5	82.5	--	--	--
			Asian	1.0	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.2	**	**	**	**	**	**	**	**	**	**	**
Henry Heywood Memorial	Gardner	350	TOTAL	100.0%	18.3%	45	19	3.4%	64.3%	42.9%	61.7%	33.7%	2.9%	1.7%	--
		0.4%	White, non-Hisp.	97.7	18.7	45	19	3.2	64.6	43.3	61.7	33.9	2.6	1.8	--
			Black, non-Hisp.	0.3	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.4	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.6	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

					Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean										
Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		% Total	# Primary	# Repeat				% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
Holy Family (formerly Bon Secours)	Methuen	1,223	TOTAL	100.0%	30.4%	219	153	4.0%	74.4%	47.3%	69.8%	25.7%	3.9%	0.3%	0.2%
		1.4%	White, non-Hisp.	76.0	31.8	170	125	3.7	83.7	44.1	82.7	12.8	3.8	0.4	0.3
			Black, non-Hisp.	1.3	**	**	**	18.7	50.0	43.7	37.5	43.7	18.7	--	--
			Hispanic	21.5	26.2	44	25	4.6	42.6	57.4	25.5	71.1	3.4	--	--
			Asian	1.2	**	**	**	--	80.0	66.7	86.7	6.7	6.7	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Hunt Memorial	Danvers	767	TOTAL	100.0%	21.6%	112	54	3.3%	94.5%	62.1%	89.6%	7.6%	1.7%	0.8%	0.4%
		0.8%	White, non-Hisp.	96.3	21.4	108	50	3.4	94.7	61.7	89.6	7.6	1.6	0.8	0.4
			Black, non-Hisp.	0.7	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.4	**	**	**	--	90.9	63.6	90.9	9.1	--	--	--
			Asian	1.2	**	**	**	**	**	**	**	**	**	**	**
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.3	**	**	**	**	**	**	**	**	**	**	**
Jordan	Plymouth	749	TOTAL	100.0%	23.2%	100	74	3.2%	80.8%	53.0%	80.5%	16.3%	2.5%	--	0.7%
		0.8%	White, non-Hisp.	96.7	23.5	99	71	3.0	80.7	52.9	81.2	15.6	2.5	--	0.7
			Black, non-Hisp.	1.5	**	**	**	9.1	90.9	45.5	63.6	36.4	--	--	--
			Hispanic	0.7	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.9	**	**	**	**	**	**	**	**	**	**	**
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Lawrence General	Lawrence	1,893	TOTAL	100.0%	22.3%	245	178	4.7%	62.5%	50.4%	58.0%	37.5%	3.1%	0.6%	0.8%
		2.1%	White, non-Hisp.	60.4	22.4	161	95	4.0	73.5	45.7	80.1	15.0	3.1	0.6	1.0
			Black, non-Hisp.	0.9	**	**	**	11.8	64.7	47.1	64.7	29.4	--	--	5.9
			Hispanic	35.8	23.0	79	77	5.9	44.2	59.7	20.4	75.8	3.1	0.3	0.4
			Asian	2.6	**	**	**	2.0	58.0	34.0	58.0	36.0	2.0	4.0	--
			Other	0.3	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Leominster	Leominster	1,289	TOTAL	100.0%	22.1%	181	104	2.9%	72.8%	50.9%	68.4%	29.5%	1.8%	0.3%	--
		1.4%	White, non-Hisp.	81.5	21.9	148	82	2.4	75.7	50.4	74.9	23.4	1.5	0.2	--
			Black, non-Hisp.	3.7	**	**	**	6.2	62.5	56.2	31.2	66.7	2.1	--	--
			Hispanic	9.9	23.4	18	12	4.7	61.7	53.9	40.6	57.0	2.3	--	--
			Asian	4.5	**	**	**	5.2	51.7	46.6	48.3	46.6	3.4	1.7	--
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Leonard Morse	Natick	748	TOTAL	100.0%	23.4%	111	64	3.2%	89.4%	58.4%	85.0%	9.5%	1.7%	2.4%	1.3%
		0.8%	White, non-Hisp.	91.4	23.0	98	59	2.9	90.5	58.0	87.6	8.3	1.8	1.0	1.3
			Black, non-Hisp.	1.2	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	2.7	**	**	**	--	80.0	90.0	60.0	30.0	5.0	5.0	--
			Asian	1.7	**	**	**	--	92.3	100.0	84.6	--	--	7.7	7.7
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	2.8	**	**	**	14.3	81.0	14.3	42.9	14.3	--	42.9	--

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean										
					% Total	# Primary	# Repeat				% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
Lowell General	Lowell	2,403	TOTAL	100.0%	21.8%	300	223	4.7%	73.0%	32.3%	63.7%	34.2%	2.1%	--	--
		2.7%	White, non-Hisp.	70.7	24.0	226	182	3.9	83.2	34.5	76.5	21.3	2.2	--	0.1
			Black, non-Hisp.	1.2	**	**	**	13.8	34.5	51.7	20.7	79.3	--	--	--
			Hispanic	10.6	20.4	24	28	5.5	56.5	33.7	25.9	71.4	2.7	--	--
			Asian	17.1	13.4	43	12	7.3	43.3	21.2	36.7	62.0	1.2	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.4	**	**	**	--	90.0	40.0	90.0	--	10.0	--	--
Malden	Malden	1,947	TOTAL	100.0%	25.4%	304	190	3.3%	81.9%	42.3%	75.0%	20.9%	3.9%	0.2%	--
		2.2%	White, non-Hisp.	89.2	25.4	270	171	2.9	83.6	43.1	77.6	18.2	4.0	0.2	--
			Black, non-Hisp.	1.4	**	**	**	3.6	75.0	42.9	50.0	42.9	7.1	--	--
			Hispanic	4.0	27.3	15	6	5.2	61.0	41.6	49.4	50.6	--	--	--
			Asian	4.0	23.1	11	7	9.0	71.8	34.6	53.8	42.3	3.8	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	1.3	**	**	**	11.5	65.4	11.5	69.2	26.9	3.8	--	--
Martha's Vineyard	Oak Bluffs	160	TOTAL	100.0%	37.5%	42	18	5.0%	76.2%	82.5%	69.4%	21.9%	6.9%	1.2%	0.6%
		0.2%	White, non-Hisp.	95.6	35.9	42	13	4.6	76.5	82.4	69.3	21.6	7.2	1.3	0.7
			Black, non-Hisp.	0.6	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.2	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.6	**	**	**	**	**	**	**	**	**	**	**
			Other	1.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.6	**	**	**	**	**	**	**	**	**	**	**
Mary Lane	Ware	158	TOTAL	100.0%	24.7%	20	19	3.2%	75.3%	48.7%	74.1%	19.6%	5.7%	--	0.6%
		0.2%	White, non-Hisp.	98.1	25.2	20	19	2.6	74.8	47.7	75.5	18.7	5.2	--	0.6
			Black, non-Hisp.	--	--	--	--	--	--	--	--	--	--	--	--
			Hispanic	1.3	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.6	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Melrose-Wakefield	Melrose	1,207	TOTAL	100.0%	33.0%	222	176	3.5%	81.6%	45.0%	91.3%	6.5%	1.4%	0.4%	0.3%
		1.3%	White, non-Hisp.	96.9	33.3	219	171	3.5	81.9	44.5	91.3	6.6	1.4	0.4	0.3
			Black, non-Hisp.	0.4	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	0.7	**	**	**	**	**	**	**	**	**	**	**
			Asian	1.8	**	**	**	4.5	63.6	63.6	95.5	4.5	--	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Milford-Whitinsville	Milford	564	TOTAL	100.0%	32.1%	105	76	2.1%	77.3%	35.6%	75.5%	18.6%	5.1%	0.7%	--
		0.6%	White, non-Hisp.	95.6	32.1	100	73	2.0	77.4	35.4	76.4	17.6	5.2	0.7	--
			Black, non-Hisp.	0.9	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	2.1	**	**	**	--	66.7	33.3	41.7	50.0	8.3	--	--
			Asian	0.7	**	**	**	**	**	**	**	**	**	**	**
			Other	0.4	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.4	**	**	**	**	**	**	**	**	**	**	**

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

					Method of Delivery						Delivery Method of Payment				
					Caesarean										
Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		% Total	# Primary	# Repeat	% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
Morton	Taunton	700	TOTAL	100.0%	31.0%	150	67	6.0%	77.7%	34.0%	68.7%	28.4%	2.0%	0.9%	--
		0.8%	White, non-Hisp.	92.9	31.2	141	62	5.5	78.5	33.7	71.7	25.2	2.2	0.9	--
			Black, non-Hisp.	2.6	**	**	**	--	72.2	33.3	38.9	61.1	--	--	--
			Hispanic	4.0	**	**	**	21.4	60.7	39.3	21.4	78.6	--	--	--
			Asian	0.4	**	**	**	**	**	**	**	**	**	**	**
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Mount Auburn	Cambridge	1,308	TOTAL	100.0%	24.0%	213	101	2.7%	74.5%	59.6%	69.8%	22.4%	2.4%	0.8%	4.5%
		1.4%	White, non-Hisp.	80.4	24.0	173	79	2.8	76.9	59.3	75.1	19.4	2.3	0.6	2.7
			Black, non-Hisp.	6.1	28.7	13	10	2.5	58.7	65.0	45.0	45.0	--	5.0	5.0
			Hispanic	5.7	**	**	**	1.3	65.3	66.7	41.3	49.3	5.3	1.3	2.7
			Asian	4.4	**	**	**	5.2	77.6	75.9	77.6	13.8	--	--	8.6
			Other	0.5	**	**	**	**	**	**	**	**	**	**	**
			Unknown	2.8	**	**	**	--	56.8	18.9	24.3	16.2	5.4	--	54.1
Nantucket Cottage	Nantucket	89	TOTAL	100.0%	20.2%	10	8	3.4%	77.5%	79.8%	80.9%	11.2%	3.4%	1.1%	3.4%
		0.1%	White, non-Hisp.	96.6	20.9	10	8	3.5	77.9	80.2	81.4	10.5	3.5	1.2	3.5
			Black, non-Hisp.	1.1	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	2.2	**	**	**	**	**	**	**	**	**	**	**
			Asian	--	--	--	--	--	--	--	--	--	--	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
New England Memorial	Stoneham	760	TOTAL	100.0%	33.7%	162	94	3.3%	92.5%	60.5%	92.1%	3.9%	2.9%	0.9%	0.1%
		0.8%	White, non-Hisp.	95.5	33.9	155	91	3.3	92.7	59.6	92.4	3.7	2.8	1.0	0.1
			Black, non-Hisp.	0.7	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.8	**	**	**	--	92.9	78.6	85.7	7.1	7.1	--	--
			Asian	1.8	**	**	**	7.1	92.9	71.4	85.7	7.1	7.1	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Newton-Wellesley	Newton	3,027	TOTAL	100.0%	21.6%	404	249	3.0%	95.1%	60.9%	92.0%	1.7%	1.3%	0.5%	4.5%
		3.4%	White, non-Hisp.	94.9	21.1	379	226	2.9	95.3	60.5	92.3	1.6	1.3	0.5	4.4
			Black, non-Hisp.	1.6	**	**	**	6.2	91.7	68.7	87.5	6.2	--	--	6.2
			Hispanic	1.4	**	**	**	2.3	95.3	65.1	88.4	--	2.3	--	9.3
			Asian	1.9	28.8	13	4	6.8	93.2	76.3	88.1	5.1	3.4	1.7	1.7
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
North Adams Regional	North Adams	393	TOTAL	100.0%	20.9%	55	27	3.6%	77.4%	55.0%	69.7%	26.0%	4.3%	--	--
		0.4%	White, non-Hisp.	95.7	21.3	53	27	3.7	77.7	54.8	70.2	25.5	4.3	--	--
			Black, non-Hisp.	1.5	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.5	**	**	**	**	**	**	**	**	**	**	**
			Asian	1.0	**	**	**	**	**	**	**	**	**	**	**
			Other	0.3	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean						% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
					% Total	# Primary	# Repeat								
Norwood	Norwood	1,162	TOTAL	100.0%	21.5%	136	114	3.2%	88.7%	53.4%	87.7%	8.8%	1.5%	1.9%	0.1%
		1.3%	White, non-Hisp.	97.4	21.5	134	109	2.9	89.1	53.5	88.0	8.7	1.5	1.8	0.1
			Black, non-Hisp.	0.5	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	0.6	**	**	**	**	**	**	**	**	**	**	**
			Asian	1.3	**	**	**	6.7	80.0	60.0	80.0	13.3	6.7	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Providence	Holyoke	1,524	TOTAL	100.0%	16.8%	151	104	2.5%	61.2%	49.5%	56.7%	38.1%	2.4%	1.4%	1.4%
		1.7%	White, non-Hisp.	75.0	17.4	121	77	2.2	64.4	52.9	71.2	22.6	3.1	1.7	1.4
			Black, non-Hisp.	2.0	**	**	**	--	43.3	40.0	40.0	60.0	--	--	--
			Hispanic	21.1	15.3	25	24	3.4	53.0	41.4	10.0	88.5	0.6	0.3	0.6
			Asian	0.7	**	**	**	20.0	30.0	50.0	40.0	50.0	--	10.0	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	1.3	**	**	**	--	55.0	--	10.0	75.0	--	--	15.0
Quincy City	Quincy	1,074	TOTAL	100.0%	30.7%	211	119	1.4%	49.1%	48.3%	78.9%	17.0%	2.5%	0.7%	0.9%
		1.2%	White, non-Hisp.	93.8	31.3	199	116	1.4	49.9	48.5	79.7	16.3	2.7	0.5	0.8
			Black, non-Hisp.	1.0	**	**	**	--	27.3	36.4	72.7	27.3	--	--	--
			Hispanic	2.0	**	**	**	--	27.3	59.1	59.1	40.9	--	--	--
			Asian	2.3	**	**	**	--	48.0	48.0	80.0	16.0	--	4.0	--
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.7	**	**	**	**	**	**	**	**	**	**	**
Salem	Salem	1,595	TOTAL	100.0%	24.0%	236	147	4.1%	87.8%	51.3%	70.8%	25.7%	1.6%	1.6%	0.3%
		1.8%	White, non-Hisp.	84.3	23.9	197	124	3.7	89.2	49.0	78.1	18.2	1.6	1.9	0.3
			Black, non-Hisp.	1.9	**	**	**	12.9	67.7	35.5	35.5	64.5	--	--	--
			Hispanic	9.5	25.0	22	16	4.6	80.3	75.7	19.1	79.6	1.3	--	--
			Asian	1.1	**	**	**	5.6	88.9	50.0	72.2	22.2	5.6	--	--
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	2.9	**	**	**	8.5	85.1	48.9	57.4	38.3	2.1	--	2.1
South Shore	Weymouth	2,072	TOTAL	100.0%	29.2%	338	266	3.1%	83.1%	19.5%	92.4%	3.9%	2.6%	0.5%	0.7%
		2.3%	White, non-Hisp.	93.1	29.5	319	251	3.0	83.8	19.6	93.4	3.7	2.5	0.4	0.1
			Black, non-Hisp.	0.4	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	0.3	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.9	**	**	**	10.5	68.4	21.1	89.5	10.5	--	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	5.1	24.5	14	12	2.8	71.7	16.0	78.3	2.8	4.7	2.8	11.3
St. Elizabeth's	Boston	1,259	TOTAL	100.0%	24.6%	191	119	3.9%	79.8%	29.3%	63.9%	33.4%	1.4%	1.0%	0.3%
		1.4%	White, non-Hisp.	58.5	27.0	117	82	3.7	88.7	25.8	80.7	16.6	1.6	1.1	--
			Black, non-Hisp.	9.7	27.9	19	15	6.6	73.0	32.0	48.4	45.9	2.5	0.8	2.5
			Hispanic	20.7	19.5	34	17	3.1	65.1	43.7	30.3	67.4	0.4	1.5	0.4
			Asian	11.1	18.6	21	5	4.3	66.4	18.6	51.4	47.1	1.4	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean										
					% Total	# Primary	# Repeat				% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
St. Joseph's	Lowell	601	TOTAL	100.0%	36.6%	148	72	3.3%	68.7%	40.3%	92.7%	5.3%	1.8%	0.2%	--
		0.7%	White, non-Hisp.	84.9	36.5	122	64	2.5	71.6	41.4	93.5	4.7	1.6	0.2	--
			Black, non-Hisp.	1.0	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	4.2	68.0	12	5	12.0	56.0	24.0	84.0	12.0	4.0	--	--
			Asian	9.8	**	**	**	6.8	50.8	35.6	88.1	8.5	3.4	--	--
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
St. Luke's	New Bedford	2,127	TOTAL	100.0%	25.4%	349	191	5.4%	75.9%	38.3%	65.4%	31.6%	2.7%	0.2%	--
		2.4%	White, non-Hisp.	85.6	24.8	294	157	4.8	79.3	39.3	71.8	25.1	2.9	0.3	--
			Black, non-Hisp.	6.9	28.6	24	18	8.8	60.5	25.2	30.6	68.7	0.7	--	--
			Hispanic	6.7	28.7	27	14	8.4	51.7	37.8	22.4	75.5	2.1	--	--
			Asian	0.4	**	**	**	**	**	**	**	**	**	**	**
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
St. Margaret's	Boston	3,302	TOTAL	100.0%	30.6%	644	363	17.1%	68.4%	42.1%	62.4%	34.4%	2.5%	0.4%	0.4%
		3.7%	White, non-Hisp.	68.9	33.5	466	292	17.1	77.7	41.5	73.4	24.2	1.9	0.3	0.3
			Black, non-Hisp.	18.4	22.4	101	35	16.6	47.9	43.8	41.4	53.7	3.3	0.8	0.8
			Hispanic	7.2	29.5	45	25	18.5	45.4	44.5	23.5	70.6	5.9	--	--
			Asian	5.0	23.9	30	9	14.6	53.0	41.5	48.2	50.6	0.6	0.6	--
			Other	0.4	**	**	**	33.3	--	41.7	16.7	66.7	16.7	--	--
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
St. Vincent's	Worcester	2,121	TOTAL	100.0%	14.4%	187	119	3.2%	85.9%	49.4%	79.9%	17.4%	1.1%	1.4%	0.2%
		2.4%	White, non-Hisp.	62.3	13.6	105	75	2.6	88.3	56.3	88.2	10.5	1.0	0.2	0.2
			Black, non-Hisp.	2.0	**	**	**	2.3	67.4	46.5	48.8	48.8	--	2.3	--
			Hispanic	5.3	16.1	11	7	3.6	81.2	50.9	47.3	49.1	1.8	1.8	--
			Asian	2.8	**	**	**	6.8	78.0	59.3	71.2	28.8	--	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	27.5	15.1	56	32	4.3	83.6	32.5	70.5	23.1	1.5	4.3	0.5
Sturdy Memorial	Attleboro	1,014	TOTAL	100.0%	28.4%	172	116	4.4%	65.2%	48.2%	82.8%	14.5%	2.1%	0.5%	0.1%
		1.1%	White, non-Hisp.	93.8	28.0	160	106	4.0	65.7	48.8	83.4	13.9	2.1	0.5	0.1
			Black, non-Hisp.	1.1	**	**	**	18.2	63.6	45.5	81.8	18.2	--	--	--
			Hispanic	1.8	**	**	**	22.2	44.4	44.4	61.1	38.9	--	--	--
			Asian	3.2	**	**	**	3.1	59.4	34.4	78.1	18.7	3.1	--	--
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Tobey	Wareham	475	TOTAL	100.0%	19.6%	51	42	2.1%	88.8%	64.6%	68.6%	24.4%	4.4%	1.1%	1.5%
		0.5%	White, non-Hisp.	92.4	19.6	48	38	2.1	89.1	67.0	70.2	23.2	4.6	1.1	0.9
			Black, non-Hisp.	4.2	**	**	**	5.0	90.0	40.0	50.0	45.0	5.0	--	--
			Hispanic	1.3	**	**	**	**	**	**	**	**	**	**	**
			Asian	0.6	**	**	**	**	**	**	**	**	**	**	**
			Other	0.8	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.6	**	**	**	**	**	**	**	**	**	**	**

TABLE B-10, continued
HOSPITAL PROFILES
MASSACHUSETTS OCCURRENCE BIRTHS
1988

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother		Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
					Caesarean										
					% Total	# Primary	# Repeat				% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
Waltham-Weston	Waltham	672	TOTAL	100.0%	22.8%	81	72	3.7%	82.4%	47.8%	79.3%	15.3%	2.8%	2.4%	0.1%
		0.8%	White, non-Hisp.	85.0	23.5	71	63	3.5	84.4	48.9	81.6	12.8	3.2	2.5	--
			Black, non-Hisp.	1.6	**	**	**	--	81.8	36.4	63.6	27.3	9.1	--	--
			Hispanic	8.3	**	**	**	5.4	67.9	35.7	62.5	35.7	--	1.8	--
			Asian	4.9	**	**	**	6.1	72.7	51.5	75.8	21.2	--	3.0	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**
Winchester	Winchester	1,664	TOTAL	100.0%	27.5%	291	166	3.5%	86.1%	47.4%	88.2%	7.0%	2.8%	0.4%	1.7%
		1.8%	White, non-Hisp.	96.6	27.4	279	161	3.4	86.6	47.1	88.3	6.9	2.7	0.4	1.7
			Black, non-Hisp.	0.4	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.1	**	**	**	5.3	78.9	57.9	89.5	10.5	--	--	--
			Asian	1.7	**	**	**	7.1	71.4	53.6	89.3	7.1	3.6	--	--
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Worcester Hahnemann	Worcester	1,076	TOTAL	100.0%	25.1%	159	111	2.5%	65.9%	50.0%	77.2%	19.2%	2.9%	0.6%	0.1%
		1.2%	White, non-Hisp.	90.4	25.4	146	101	2.5	66.6	50.2	80.7	15.9	2.9	0.4	0.1
			Black, non-Hisp.	2.9	**	**	**	6.5	61.3	54.8	45.2	51.6	--	3.2	--
			Hispanic	3.8	**	**	**	2.4	61.0	58.5	26.8	65.9	4.9	2.4	--
			Asian	1.6	**	**	**	--	47.1	41.2	88.2	11.8	--	--	--
			Other	0.5	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.8	**	**	**	**	**	**	**	**	**	**	**
Worcester Memorial	Worcester	3,559	TOTAL	100.0%	27.3%	631	330	9.9%	88.8%	52.9%	76.4%	21.4%	2.1%	--	0.1%
		4.0%	White, non-Hisp.	86.5	27.6	549	291	9.2	90.6	54.4	82.8	15.1	1.9	--	0.1
			Black, non-Hisp.	3.1	27.3	22	8	20.9	75.5	33.6	45.5	49.1	5.5	--	--
			Hispanic	7.5	24.7	41	25	12.7	78.4	47.8	20.9	78.0	1.1	--	--
			Asian	2.2	**	**	**	12.8	73.1	41.0	56.4	39.7	3.8	--	--
			Other	0.1	**	**	**	**	**	**	**	**	**	**	**
			Unknown	0.5	**	**	**	15.8	78.9	36.8	94.7	--	5.3	--	--
All other hospitals, birthing centers, at home en route, other	Statewide	522	TOTAL	100.0%	**	**	**	7.1%	53.4%	62.2%	45.1%	20.2%	23.1%	1.7%	9.8%
		0.6%	White, non-Hisp.	76.1	**	**	**	4.8	62.0	74.7	51.9	13.9	26.6	1.5	6.1
			Black, non-Hisp.	6.0	**	**	**	12.9	25.8	22.6	29.0	48.4	16.1	--	6.5
			Hispanic	3.7	**	**	**	26.3	26.3	21.1	10.5	78.9	--	5.3	5.3
			Asian	6.2	**	**	**	15.6	21.9	15.6	28.1	56.2	6.2	3.1	6.2
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
			Unknown	7.9	**	**	**	7.3	29.3	29.3	19.5	4.9	19.5	2.4	53.7
TOTAL		89,955	TOTAL	100.0%	24.4%	13,667	8,191	5.9%	76.1%	51.0%	73.4%	22.0%	2.8%	0.7%	1.0%
		100.0%	White, non-Hisp.	80.3	25.0	11,251	6,781	5.0	80.2	52.2	81.2	14.7	2.6	0.6	0.9
			Black, non-Hisp.	7.3	22.4	951	509	12.4	54.4	43.5	42.0	51.7	3.7	1.3	1.3
			Hispanic	7.4	23.0	870	651	7.9	59.3	51.7	28.9	65.5	4.4	0.4	0.7
			Asian	3.5	18.6	434	155	7.1	64.8	43.8	60.5	33.9	3.7	0.8	1.0
			Other	0.2	21.1	25	19	7.1	59.5	53.8	41.0	45.7	9.0	2.4	1.9
			Unknown	1.3	19.0	136	76	5.5	74.5	30.5	62.9	21.2	2.8	4.2	8.9

MORTALITY

SECTION C

MORTALITY

Resident deaths increased by 1.5% in Massachusetts from 55,562 in 1987 to 56,407 in 1988. The rate of deaths per 1,000 population also increased from 9.5 in 1987 to 9.6 in 1988. As with live births, deaths to Massachusetts residents include all deaths to Massachusetts residents regardless of the state in which they occurred. Most data presented in this section are residence data. Occurrence data are used only with medical examiner data.

DEATHS BY RACE

The number of deaths by race remained relatively constant, with white residents comprising 96.1% of total deaths in Massachusetts.

Race information obtained from death certificates is very different from that provided on birth certificates. On birth certificates, race is provided as part of the confidential, statistical portion of the record. As such, there is a significant problem with non-respondents. On the death certificate, however, race information (as is all information on the death certificate) is part of the legal record and must be provided by the funeral director in order to register the death. An unknown or non-response in the race item might be the result of a case in which a body is badly decomposed, rather than a refusal to provide the information.

As with birth certificate data prior to June, 1986, there is a problem identifying those deaths to individuals of Hispanic ethnicity. The question as asked on the 1988 death certificate was limited to a race question and, in many cases, individuals with an Hispanic ethnicity were identified using a race designation, for example, white or black, and not an ethnicity response of Hispanic. If the response was Hispanic, however, these deaths are included in the category of "white". Race information on the death certificate is provided by the informant, which in most cases is a close relative. An additional item on Hispanic origin was added to the death record on January 1, 1989.

DEATHS BY AGE

Persons 75 years of age or older accounted for 53.7% of deaths. The percent of deaths to residents in this age group vary widely by race and sex.

SEX	RACE	% OF DEATHS UNDER AGE 75	% OF DEATHS 75 YEARS AND OLDER
MALE	WHITE	56.6	43.4
	BLACK	80.8	19.2
	TOTAL	57.7	42.3
FEMALE	WHITE	34.6	65.4
	BLACK	64.6	35.4
	TOTAL	35.6	64.4
TOTAL	WHITE	45.2	54.8
	BLACK	73.4	26.6
	TOTAL	46.3	53.7

DEATHS BY PLACE OF OCCURRENCE

Between 1987 and 1988, there was little variation in where deaths occurred, as shown in the data presented below:

SITE	% OF DEATHS 1988	% OF DEATHS 1987
HOSPITAL	62.0	61.8
AT HOME	15.7	15.3
NURSING OR REST HOME	15.5	15.6
EN ROUTE TO HOSPITAL OR DEAD ON ARRIVAL	5.8	6.2
UNKNOWN	1.0	1.0
TOTAL	100.0	100.0[1]

---

[1] Percent does not sum to 100.0 due to rounding.

DEATHS BY CAUSE

Cause of death statistics in this report are based on the Ninth Revision of the International Classification of Diseases (ICD-9). The methodology of coding cause of death from death certificates is consistent nationally, using the Automated Classification of Medical Entities (ACME), developed by the National Center for Health Statistics (NCHS). The ACME system requires every disease or condition mentioned on the record to be coded. The underlying cause is then selected by a computer program which incorporates the ICD-9 rules and conventions. Cause of death information in this report is based on underlying cause, except where otherwise noted.

Three tables (C–5, C–6, and C–7) present data based on multiple conditions rather than underlying cause data. These tables are presented to illustrate the use of multiple cause data by extending the utility of mortality data. This is particularly true when utilizing mortality data as a method of surveillance. For example, in 1988 there were 13,142 deaths resulting from cancer as an underlying cause of death. However, an additional 2,308 deaths where cancer was not the underlying cause did include cancer as a mentioned condition; thus increasing the utilization of the mortality file as a surveillance data base for cancer.

Table C–7 demonstrates the ability of multiple cause data to enhance the function of mortality data as a morbidity tool in cases of diseases that are not traditional underlying causes of death. In the case of diabetes, for example, 921 deaths had this condition listed as an underlying cause, but an additional 3,443 had diabetes listed as a mentioned condition, thus increasing the ability to determine the prevalence of diabetes in the population.

The five leading causes of death differ somewhat by race. Among white and non–white Massachusetts residents, heart disease, cancer, diseases of the respiratory system, and cerebrovascular disease rank as the first four leading causes. However, in 1988, pneumonia and influenza rank as the fifth leading cause of death for white Massachusetts residents, while homicide ranks fifth among the leading causes for non–white residents.

CAUSE	WHITE	RANK	NON–WHITE	RANK
HEART DISEASE	19,662 36.3%	1	536 24.8%	1
MALIGNANT NEOPLASMS	12,659 23.4%	2	378 17.5%	2
DISEASES OF THE RESPIRATORY SYSTEM	5,173 9.5%	3	147 6.8%	3
CEREBROVASCULAR DISEASE	3,605 6.7%	4	126 5.8%	4
PNEUMONIA & INFLUENZA	2,454 4.5%	5	NOT LEADING CAUSE	
HOMICIDE	NOT LEADING CAUSE		89 4.1%	5
ALL OTHER CAUSES[1]	10,651 19.6%	NA	887 41.0%	NA

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[1] All Other Causes includes diabetes mellitus, chronic liver disease and cirrhosis, suicide, intentional and unintentional injuries, and all other causes not specifically mentioned above.

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

The Ninth Revision of the International Classification of Diseases was developed before the identification of AIDS. Classification of this disease and related diseases has evolved since 1981. The deaths presented in Table C-10 were coded by using the most current schedule, which began with 1987 data. Therefore, comparison data prior to 1987 are not available.

DEATHS CERTIFIED BY MEDICAL EXAMINERS

The total number of deaths certified by medical examiners decreased from 10,235 in 1987 to 9,430 in 1988. Of the deaths certified by medical examiners, 71.9% were reported as a result of natural causes. The percentage of deaths due to natural causes (i.e., non-injury related causes) certified by medical examiners varies widely by county, from a high of 82.2% in Middlesex County to a low of 50.7% in Worcester County. Worcester County had the greatest number of deaths (1,179) that were referred to medical examiners, but with the certification retained by the attending physician.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

AGE-ADJUSTED RATE

A procedure for adjusting rates, designed to minimize the effects of differences in age distribution when comparing rates for different populations. This procedure is accomplished by the computational process known as age standardization, whereby mortality statistics are adjusted to a reference population. For this publication, the reference population is the 1940 U.S. population, the same as used by the National Center for Health Statistics. The results of the process is a summary index that can be used to compare rates of different populations throughout the nation and over time.

CAUSE OF DEATH

The underlying condition which gives rise to a series of events leading to death. The code used for identifying cause of death is the Ninth Revision of the International Classification of Diseases. The underlying cause of death is generated by a computer software program developed by the National Center for Health Statistics.

DEATH CERTIFICATE

A vital record signed by a licensed physician that includes cause of death, decedent's name, sex, birth date, place of residence, and place of occurrence.

INTERNATIONAL CLASSIFICATION OF DISEASES, NINTH REVISION

The International Classification of Disease (ICD) classifies mortality information for statistical purposes. The ICD was first used in 1900 and has since been revised about every 10 years. The Ninth Revision, published in 1977, is used to code mortality data beginning with 1979.

MISER

The Massachusetts Institute for Social and Economic Research. This research institute, located at the University of Massachusetts in Amherst, produces the population estimates and projections used officially by the Massachusetts Department of Public Health.

OCCURRENCE DEATH

Occurrence death includes all deaths that occur within the state, including deaths that occur to non-residents. An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

RACE

For death records: the response of the death record informant, for example, spouse or next of kin.

RESIDENT DEATH

The usual place of residence as reported by the informant. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Unless otherwise noted, all data in this publication are resident data. Resident deaths include all deaths that occur to residents of the Commonwealth, wherever they occur. An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

UNDERLYING CAUSE OF DEATH

The underlying cause of death is: 1.) the disease or injury that initiated the series of events leading to death, or 2.) the circumstances of the unintentional or intentional injury that resulted in the death. See Death Certificate.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC DEATH RATE

$$\frac{\text{Number of Resident Deaths in Specific Age Group}}{\text{Total Population of Specific Age Group}} \times 100{,}000$$

CAUSE-SPECIFIC DEATH RATE

$$\frac{\text{Number of Resident Deaths for a Specific Cause}}{\text{Total Population}} \times 100{,}000$$

CRUDE DEATH RATE

$$\frac{\text{Number of Resident Deaths in A Year}}{\text{Total Population}} \times 1{,}000$$

FIGURE C - 1

Every day in 1988, residents of Massachusetts experienced an average of:

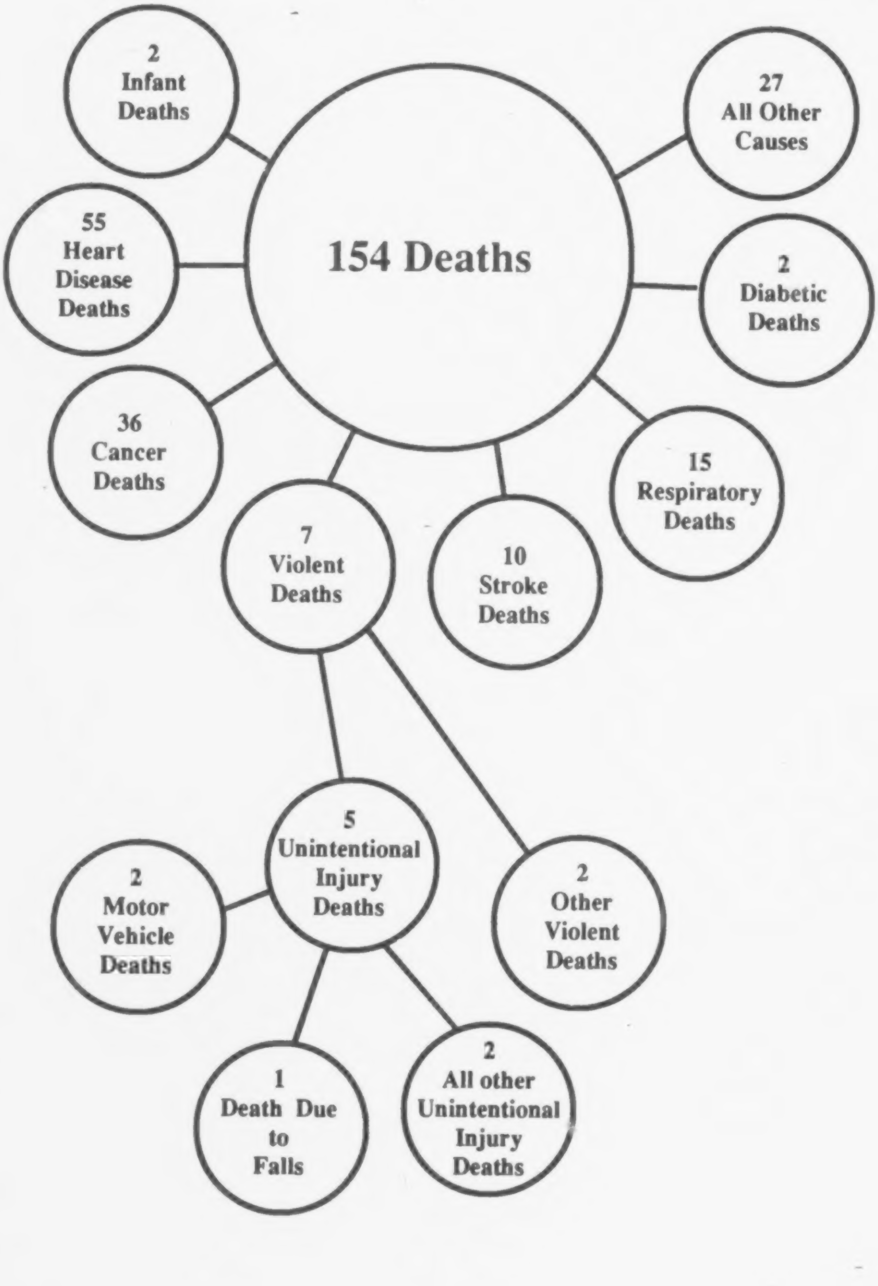
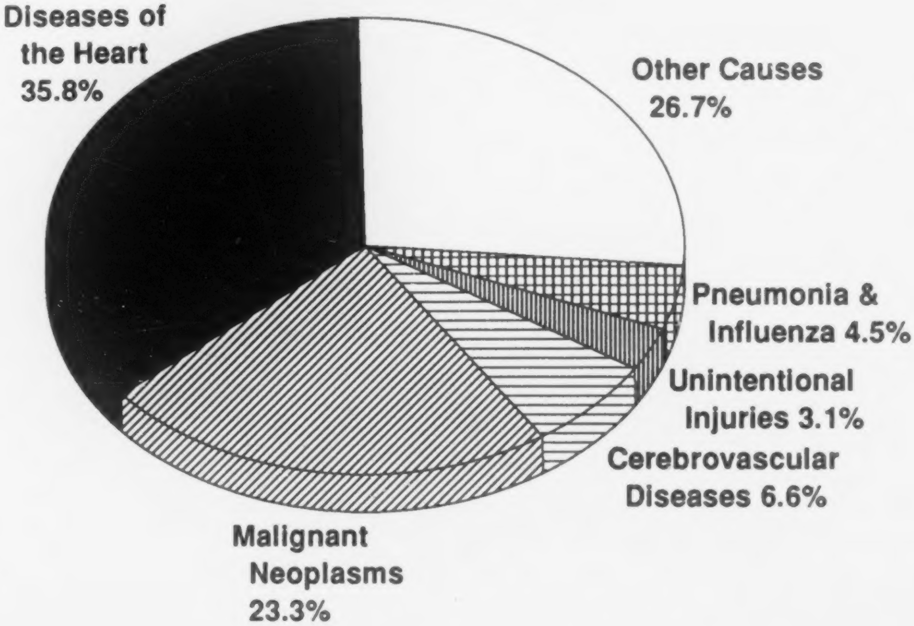

154 Deaths
2 Infant Deaths
55 Heart Disease Deaths
36 Cancer Deaths
7 Violent Deaths
10 Stroke Deaths
15 Respiratory Deaths
2 Diabetic Deaths
27 All Other Causes
5 Unintentional Injury Deaths
2 Other Violent Deaths
2 Motor Vehicle Deaths
1 Death Due to Falls
2 All other Unintentional Injury Deaths

FIGURE C - 2

Five Leading Underlying Causes of Death
Massachusetts: 1988



Number of Deaths: 56,407

TABLE C-1
TRENDS IN MORTALITY CHARACTERISTICS
MASSACHUSETTS RESIDENTS
1980-1988

		Year								
		1980	1981	1982	1983	1984	1985	1986	1987	1988
Resident Deaths	(#)	54,934	52,813	52,867	54,150	55,189	55,597	55,860	55,562	56,407
Age-adjusted Death	Rate	566.3	543.4	536.7	540.2	543.7	541.6	534.8	527.8	533.3
Race of Decedent:										
White	(#)	53,251	51,190	51,202	52,412	53,309	53,580	53,903	53,522	54,224
	(%)	96.9	96.9	96.8	96.8	96.6	96.4	96.5	96.3	96.1
Black	(#)	1,508	1,447	1,462	1,497	1,644	1,779	1,731	1,786	1,909
	(%)	2.8	2.8	2.8	2.8	3.0	3.2	3.1	3.2	3.4
Other	(#)	141	153	168	199	188	214	211	252	254
	(%)	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4
Unknown	(#)	34	23	35	42	48	24	15	2	20
	(%)	--	--	--	--	--	--	--	--	--
Age of Decedent:										
< 1 year	(#)	748	710	764	682	699	746	695	608	693
1 - 4 years	(#)	127	120	113	121	97	112	131	96	103
5 - 19 years	(#)	547	541	497	478	472	466	440	404	407
20 - 44 years	(#)	2,680	2,594	2,423	2,546	2,628	2,734	2,900	3,041	3,243
45 - 64 years	(#)	10,504	10,303	10,141	10,087	9,947	9,691	9,150	9,052	9,051
65 - 74 years	(#)	12,411	12,193	12,373	12,393	12,750	12,790	12,638	12,530	12,593
75 - 84 years	(#)	15,506	14,775	14,673	15,132	15,435	15,515	15,984	16,091	16,003
85+ years	(#)	12,409	11,572	11,874	12,704	13,158	13,538	13,918	13,737	14,309

-- Percentage less than 0.1.

TABLE C-2
FIVE LEADING UNDERLYING CAUSES OF DEATH
AGE-ADJUSTED RATES
MASSACHUSETTS AND UNITED STATES
1980-1988

		UNDERLYING CAUSE OF DEATH											
		Heart Disease (390-398,402, 404-429)		Malignant Neoplasms (140-208)		Cerebro-vascular Diseases (430-438)		Pneumonia/ Influenza (480-487)		Unintentional Injuries (E800-E949)		All Causes	
Year		MA	U.S.*	MA	U.S.	MA	U.S.	MA	U.S.	MA	U.S.	MA	U.S.
1980	Rate	205.7	202.0	136.1	132.8	36.8	40.8	18.6	12.9	30.9	42.3	566.3	585.8
	%	39.9	38.2	22.2	20.9	7.9	8.6	4.0	2.7	3.9	5.3		
1981	Rate	197.0	195.0	136.6	131.6	34.0	38.1	16.4	12.3	29.2	39.8	543.4	568.2
	%	39.9	38.1	23.2	21.3	7.6	8.3	3.7	2.7	3.8	5.1		
1982	Rate	196.4	190.5	137.5	132.6	31.7	35.8	13.8	10.9	25.4	36.6	536.7	553.2
	%	40.0	38.3	23.8	22.0	7.3	8.0	3.2	2.5	3.4	4.8		
1983	Rate	193.0	188.8	140.0	132.5	30.2	34.4	14.7	11.8	26.6	34.9	540.2	550.5
	%	40.1	38.2	23.8	21.9	6.8	7.7	3.5	2.8	3.5	4.6		
1984	Rate	192.8	183.6	140.6	132.6	30.6	33.4	14.8	12.2	26.0	35.0	543.7	545.9
	%	38.8	37.4	23.6	22.1	7.0	7.6	3.5	2.9	3.4	4.6		
1985	Rate	186.7	180.5	139.3	133.6	29.8	32.3	16.7	13.4	26.0	34.7	541.6	546.1
	%	37.9	37.2	23.5	22.0	6.8	7.3	4.0	3.2	3.4	4.5		
1986	Rate	180.7	175.0	136.9	133.2	29.3	31.0	18.4	13.5	25.7	35.2	534.8	541.7
	%	37.2	36.4	23.4	22.3	6.7	7.1	4.5	3.3	3.3	4.5		
1987	Rate	173.2	169.9+	138.1	133.1+	29.1	30.1+	18.0	13.2+	23.8	34.6	527.8	536.2+
	%	36.2	35.9	23.9	22.4	6.8+	7.0	4.4	3.3	3.1	4.5		
1988	Rate	172.0	166.7	137.8	133.3	28.5	29.8	18.4	14.2	24.2	35.1	533.3	536.3
	%	35.8	35.3	23.3	22.5	6.6	6.9	4.5	3.6	3.1	4.5		

*Provisional United States data from the National Center for Health Statistics based on a 10 percent sample of deaths. Rates per 100,000 population in specified group.

+Revised.

TABLE C-3
LEADING UNDERLYING CAUSES OF DEATH BY AGE
MASSACHUSETTS RESIDENTS
1988

Deaths	Underlying Cause	ICD-9
Number	< 1 year old*	
371	Certain conditions originating in the perinatal period	760-779
138	Congenital anomalies	740-759
79	Sudden infant death syndrome	798.0
	1 - 4 years old	
20	Vehicle-related injuries, excluding motor vehicle	E800-E807,E826-E849
18	Congenital anomalies	740-759
11	Infectious & parasitic diseases, excluding TB, polio & syphilis	001-009,020-041,045-088,098-139
10	Malignant neoplasms	140-208
10	Motor vehicle-related injuries	E810-E825
	5 - 14 years old	
32	Vehicle-related injuries, excluding motor vehicle	E800-E807,E826-E849
23	Motor vehicle-related injuries	E810-E825
20	Malignant neoplasms of the bone, skin, oral cavity, rare sites & other	140-149,170-173,190-203
11	Congenital anomalies	740-759
8	Leukemia	204-208
	15 - 24 years old	
243	Motor vehicle-related injuries	E810-E825
94	Suicide	E950-E959
77	Homicide and legal intervention	E960-E978
73	Vehicle-related injuries, excluding motor vehicle	E800-E807,E826-E849
45	Malignant neoplasms	140-208
	25 - 44 years old	
524	Malignant neoplasms	140-208
433	Major cardiovascular diseases	390-448
251	Motor vehicle-related injuries	E810-E825
238	AIDS and HIV-related diseases	042-044
209	Suicide	E950-E959
	45 - 64 years old	
2,005	Ischemic heart disease	410-414
1,084	Malignant neoplasms of respiratory & intrathoracic organs	160-165
751	Diseases of pulmonary circulation & other forms of heart disease	415-429
740	Malignant neoplasms of digestive organs & peritoneum	150-159
736	Malignant neoplasms of the bone, skin, oral cavity, rare sites & other	140-149,170-173,190-203
	65 - 74 years old	
3,244	Ischemic heart disease	410-414
1,228	Malignant neoplasms of respiratory & intrathoracic organs	160-165
1,206	Diseases of pulmonary circulation & other forms of heart disease	415-429
1,029	Malignant neoplasms of digestive organs & peritoneum	150-159
767	Malignant neoplasms of the bone, skin, oral cavity, rare sites & other	140-149,170-173,190-203
	75 - 84 years old	
4,479	Ischemic heart disease	410-414
1,654	Diseases of pulmonary circulation & other forms of heart disease	415-429
1,278	Cerebrovascular disease	430-438
961	Malignant neoplasms of digestive organs & peritoneum	150-159
849	Malignant neoplasms of respiratory & intrathoracic organs	160-165
	85+ years old	
4,038	Ischemic heart disease	410-414
1,887	Diseases of pulmonary circulation & other forms of heart disease	415-429
1,471	Cerebrovascular disease	430-438
1,239	Pneumonia and influenza	480-487
552	Malignant neoplasms of digestive organs and peritoneum	150-159

*More complete information on causes of infant death is found in Table D-4.

TABLE C-4
RESIDENT DEATHS BY AGE, SEX AND RACE
MASSACHUSETTS RESIDENTS
1988

AGE	TOTAL			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
TOTAL*	56,407	27,282	29,120	54,224	26,081	28,140	1,909	1,044	864	254	151	103
0-4	796	469	327	628	375	253	149	83	66	17	11	6
5-9	79	47	32	63	36	27	13	8	5	3	3	--
10-14	57	37	20	48	34	14	7	3	4	2	--	2
15-19	271	194	77	233	164	69	34	28	6	3	2	1
20-24	421	324	97	364	281	83	51	38	13	6	5	1
25-29	568	414	154	488	359	129	70	47	23	10	8	2
30-34	593	425	168	500	362	138	82	53	29	11	10	1
35-39	761	555	206	674	492	182	83	60	23	4	3	1
40-44	900	595	305	798	529	269	91	59	32	9	6	3
45-49	1,144	709	435	1,034	646	388	101	58	43	8	5	3
50-54	1,495	929	566	1,388	865	523	94	56	38	13	8	5
55-59	2,470	1,455	1,015	2,335	1,388	947	121	61	60	12	5	7
60-64	3,942	2,428	1,514	3,763	2,309	1,454	149	97	52	29	21	8
65-69	5,494	3,175	2,319	5,292	3,063	2,229	176	94	82	25	18	7
70-74	7,099	3,981	3,118	6,895	3,871	3,024	180	98	82	22	11	11
75-79	7,771	3,962	3,809	7,587	3,874	3,713	153	73	80	28	14	14
80-84	8,232	3,411	4,821	8,068	3,345	4,723	146	57	89	16	9	7
85-89	7,232	2,423	4,809	7,112	2,380	4,732	102	34	68	17	8	9
90-94	4,799	1,307	3,492	4,721	1,276	3,445	67	29	38	11	2	9
95-99	1,906	384	1,522	1,871	377	1,494	28	6	22	6	1	5
≥100	372	58	314	359	55	304	11	2	9	2	1	1

*The total includes 5 male deaths of unknown age--three in the White total, one in the Black total, and one in Unknown Race total. The total also includes 19 deaths of unknown race--6 males and 13 females.

TABLE C-5
DEATHS BY UNDERLYING CAUSE AND MENTIONED CONDITIONS
MASSACHUSETTS RESIDENTS
1988

Underlying Cause	Total Deaths	Mentioned Conditions*														Ratio of Mentions to Deaths
		1	2	3	4	5	6	7	8	9	10	11	12	13	Tot 1-13	
Total	56,407	18,843	4,375	47,856	6,769	2,146	5,932	4,458	3,206	1,098	792	2,493	740	47,913	146,621	2.60
1. Malignant Neoplasms (140-208)	13,142	16,535	472	3,600	291	46	842	605	463	75	0	225	1	6,892	30,047	2.29
2. Diabetes Mellitus (250)	921	45	932	926	163	59	50	18	23	6	0	19	0	720	2,961	3.21
3. Diseases of the Heart (390-398, 402, 404-429)	20,224	1,139	1,892	34,664	1,366	798	804	1,121	707	102	11	472	1	9,249	52,326	2.59
4. Cerebrovascular Disease (430-438)	3,731	162	302	1,414	4,095	386	354	116	260	20	2	136	0	2,493	9,740	2.61
5. Atherosclerosis (440)	630	26	43	274	0	630	31	18	14	2	0	21	0	321	1,380	2.19
6. Pneumonia & Influenza (480-487)	2,532	218	143	1,052	251	33	2,534	141	90	19	0	42	0	2,243	6,766	2.67
7. COPD (490-496)	2,021	141	81	1,060	62	19	412	2,041	127	12	1	41	0	1,682	5,679	2.81
8. Other Respiratory Disease (460-466, 470-478, 500-508, 510-519)	768	56	42	427	24	4	40	53	824	7	1	70	0	792	2,340	3.05
9. Chronic Liver Disease & Cirrhosis (571)	724	34	36	211	9	3	31	20	34	729	0	16	0	985	2,108	2.91
10. Motor Vehicle Injuries (E810-E825)	775	5	3	35	4	0	0	1	6	1	775	5	0	1,197	2,032	2.62
11. Other Injuries (E800-E809, E826-E949)	967	43	25	285	22	4	42	28	51	14	0	991	0	1,773	3,278	3.39
12. Suicide & Homicide (E950-E969)	737	7	2	16	2	0	0	1	4	1	0	0	737	1,033	1,803	2.45
13. All Other Causes	9,235	432	402	3,892	480	164	792	295	603	110	2	455	1	18,533	26,161	2.83

*The numbers in the mentioned conditions columns refer to the causes with the same numbers in the underlying cause column, i.e., 1 in mentioned conditions is the number of mentions of malignant neoplasms.

TABLE C-6
MALIGNANT NEOPLASM DEATHS BY UNDERLYING CAUSE AND MENTIONED CONDITIONS
MASSACHUSETTS RESIDENTS
1988

	Underlying Cause						
Mentioned Conditions	Total	Digestive Organs & Peritoneum (150-159)	Respiratory & Intrathoracic Organs (160-165)	Bone, Connective Tissue, Skin & Breast (170-175)	Genito-Urinary Organs (179-189)	Lymphatic & Haematopoietic Tissue (200-208)	All Other Malignant Neoplasms
Total Mentioned Conditions	30,047	7,636	7,768	3,559	4,493	2,821	3,770
Mean Number of Mentioned Conditions Per Record	2.29	2.27	2.26	2.18	2.36	2.49	2.26
Deaths	13,142	3,369	3,436	1,635	1,902	1,131	1,669
1. Malignant Neoplasms (140-208)	16,535	4,275	4,268	2,206	2,447	1,236	2,103
2. Diabetes Mellitus (250)	472	149	100	55	65	51	52
3. Diseases of the Heart (390-398, 402, 404-429)	3,600	885	928	398	559	331	499
4. Cerebrovascular Disease (430-438)	291	64	70	24	57	39	37
5. Atherosclerosis (440)	46	17	15	5	4	4	1
6. Pneumonia & Influenza (480-487)	842	132	309	75	108	133	85
7. COPD (490-496)	605	82	343	27	64	27	62
8. Other Respiratory Disease (460-466, 470-478, 500-508, 510-519)	463	101	148	38	57	46	73
9. Chronic Liver Disease & Cirrhosis (571)	75	37	11	3	5	7	12
10. Unintentional Injuries (E800-E949)	226	63	54	25	28	40	16
11. All Other Causes	6,892	1,831	1,522	703	1,099	907	830

TABLE C-7
ATHEROSCLEROSIS, HYPERTENSIVE DISEASE AND DIABETES
UNDERLYING CAUSE AND MENTIONED CONDITIONS BY AGE GROUP AND SEX
MASSACHUSETTS RESIDENTS
1988

			Atherosclerosis (440)			Hypertensive Disease (401-405)			Diabetes Mellitus (250)		
Age	Sex	# of Deaths	Underlying Cause	Mentioned Conditions	Total % of Deaths	Underlying Cause	Mentioned Conditions	Total % of Deaths	Underlying Cause	Mentioned Conditions	Total % of Deaths
	Total	56,407*	630	1,516	2,146 3.8	610	2,646	3,256 5.8	921	3,443	4,364 7.7
	Male	27,287	222	593	815 3.0	255	1,011	1,266 4.6	419	1,527	1,946 7.1
	Female	29,120	408	923	1,331 4.6	355	1,635	1,990 6.8	502	1,916	2,418 8.3
0-39	Total	3,546	--	5	5 0.1	3	15	18 0.5	23	21	44 1.2
	Male	2,465	--	2	2 0.1	3	10	13 0.5	15	14	29 1.2
	Female	1,081	--	3	3 0.3	--	5	5 0.5	8	7	15 1.4
40-49	Total	2,044	2	12	14 0.7	15	59	74 3.6	38	65	103 5.0
	Male	1,304	2	10	12 0.9	11	44	55 4.2	23	40	63 4.8
	Female	740	--	2	2 0.3	4	15	19 2.6	15	25	40 5.4
50-59	Total	3,965	14	38	52 1.3	55	149	204 5.1	59	220	279 7.0
	Male	2,384	10	29	39 1.6	41	89	130 5.4	38	126	164 6.9
	Female	1,581	4	9	13 0.8	14	60	74 4.7	21	94	115 7.3
60-69	Total	9,436	44	161	205 2.2	107	460	567 6.0	185	729	914 9.7
	Male	5,603	26	103	129 2.3	66	256	322 5.7	93	386	479 8.5
	Female	3,833	18	58	76 2.0	41	204	245 6.4	92	343	435 11.4
70-79	Total	14,870	110	369	479 3.2	148	802	950 6.4	293	1,106	1,399 9.4
	Male	7,943	56	186	242 3.0	66	392	458 5.8	141	553	694 8.7
	Female	6,927	54	183	237 3.4	82	410	492 7.1	152	553	705 10.2
≥80	Total	22,541	460	931	1,391 6.2	282	1,161	1,443 6.4	323	1,302	1,625 7.2
	Male	7,583	128	263	391 5.2	68	220	288 3.8	109	408	517 6.8
	Female	14,958	332	668	1,000 6.7	214	941	1,155 7.7	214	894	1,108 7.4

*Total includes 5 deaths of unknown age.

--Indicates zero events.

TABLE C-8
SUICIDES BY CAUSE, SEX AND AGE
MASSACHUSETTS RESIDENTS
1988

UNDERLYING CAUSE	ICD-9		TOTAL	Age								
				10-14	15-19	20-29	30-39	40-49	50-59	60-69	70-79	≥80
All Suicides	E950- E958	M	373	1	26	98	80	64	34	31	20	19
		F	127	0	9	21	23	25	23	10	6	10
		T	500	1	35	119	103	89	57	41	26	29
		%	100.0	100.0	100.0	100.0*	100.0	100.0	100.0	100.0	100.0	100.0*
Poisoning by solid or liquid substances	E950	M	19	--	--	3	8	2	2	4	--	--
		F	44	--	4	7	7	10	8	3	2	3
		T	63	--	4	10	15	12	10	7	2	3
		%	12.6	--	11.4	8.4	14.6	13.5	17.5	17.1	7.7	10.3
Gases in domestic use	E951	M	1	--	--	1	--	--	--	--	--	--
		F	--	--	--	--	--	--	--	--	--	--
		T	1	--	--	1	--	--	--	--	--	--
		%	0.2	--	--	0.8	--	--	--	--	--	--
Poisoning by gases & vapors (not domestic gas)	E952	M	56	--	5	11	12	14	5	2	5	2
		F	19	--	3	2	2	2	6	1	2	1
		T	75	--	8	13	14	16	11	3	7	3
		%	15.0	--	22.9	37.1	13.6	18.0	19.3	7.3	26.9	10.3
Hanging, Strangulation & Suffocation	E953	M	118	1	11	36	23	16	15	6	5	5
		F	27	0	2	5	4	3	5	4	1	3
		T	145	1	13	41	27	19	20	10	6	8
		%	29.0	100.0	37.1	34.4	26.2	21.4	35.1	24.4	23.1	27.6
Submersion (Drowning)	E954	M	14	--	--	2	1	2	--	3	1	5
		F	8	--	--	1	1	2	2	--	--	2
		T	22	--	--	3	2	4	2	3	1	7
		%	4.4	--	--	2.5	1.9	4.5	3.5	7.3	3.8	24.1
Firearms & Explosives	E955	M	127	--	7	36	26	25	10	12	6	5
		F	18	--	--	5	6	5	2	--	--	--
		T	145	--	7	41	32	30	12	12	6	5
		%	29.0	--	20.0	34.4	31.1	33.7	21.0	29.3	23.1	17.2
Cutting & Piercing Instruments	E956	M	16	--	--	3	7	3	1	1	--	1
		F	4	--	--	--	2	1	--	--	--	1
		T	20	--	--	3	9	4	1	1	--	2
		%	4.0	--	--	2.5	8.7	4.5	1.8	2.4	--	6.9
Jumping from high places	E957	M	17	--	2	5	2	1	1	2	3	1
		F	6	--	--	1	1	1	--	2	1	--
		T	23	--	2	6	3	2	1	4	4	1
		%	4.6	--	5.7	5.0	2.9	2.2	1.8	9.8	15.4	3.4
Other & Unspecified Means	E958	M	5	--	1	1	1	1	--	1	--	--
		F	1	--	--	--	--	1	--	--	--	--
		T	6	--	1	1	1	2	--	1	--	--
		%	1.2	--	2.9	0.8	1.0	2.2	--	2.4	--	--

*Percents do not sum to 100.0 due to rounding.

-- Indicates zero events.

TABLE C-9
MOTOR VEHICLE DEATHS BY TYPE
MASSACHUSETTS RESIDENTS
1988

			Victim							
Underlying Cause	ICD-9		Total	Driver	Passenger	Motor-cyclist	Passenger, Motorcycle	Pedestrian	Pedal Cyclist	Other & Unspec.
Total	E810-E825	M	560	254	99	46	3	106	9	43
		F	215	87	65	1	--	50	--	12
		T	775	341	164	47	3	156	9	55
		%*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Collision with train	E810	M	2	--	--	--	--	--	--	2
		F	--	--	--	--	--	--	--	--
		T	2	--	--	--	--	--	--	2
		%	0.3	--	--	--	--	--	--	3.6
Collision with another motor vehicle	E812	M	165	107	27	22	--	--	--	9
		F	85	44	36	1	--	--	--	4
		T	250	151	63	23	--	--	--	13
		%	32.3	44.3	38.4	48.9	--	--	--	23.6
Collision with another vehicle	E813	M	9	--	--	--	--	--	9	--
		F	--	--	--	--	--	--	--	--
		T	9	--	--	--	--	--	9	--
		%	1.2	--	--	--	--	--	100.0	--
Motor vehicle with pedestrian	E814	M	106	--	--	--	--	106	--	--
		F	50	--	--	--	--	50	--	--
		T	156	--	--	--	--	156	--	--
		%	20.1	--	--	--	--	100.0	--	--
Other motor vehicle collision/ highway	E815	M	175	104	48	19	3	--	--	1
		F	44	24	20	--	--	--	--	--
		T	219	128	68	19	3	--	--	1
		%	28.2	37.5	41.5	40.4	100.0	--	--	1.8
Lost control without collision	E816	M	58	36	16	3	--	--	--	3
		F	25	16	7	--	--	--	--	2
		T	83	52	23	3	--	--	--	5
		%	10.7	15.2	14.0	6.4	--	--	--	9.1
Other non-collision motor vehicle	E818	M	8	1	3	1	--	--	--	3
		F	--	--	--	--	--	--	--	--
		T	8	1	3	1	--	--	--	3
		%	1.0	0.3	1.8	2.1	--	--	--	5.4
Motor vehicle of unspecified nature	E819	M	29	6	5	--	--	--	--	18
		F	11	3	2	--	--	--	--	6
		T	40	9	7	--	--	--	--	24
		%	5.2	2.6	4.3	--	--	--	--	43.6
Motor-driven snow vehicle	E820	M	3	--	--	--	--	--	--	3
		F	--	--	--	--	--	--	--	--
		T	3	--	--	--	--	--	--	3
		%	0.4	--	--	--	--	--	--	5.4
Other off-road motor vehicle	E821	M	5	--	--	1	--	--	--	4
		F	--	--	--	--	--	--	--	--
		T	5	--	--	1	--	--	--	4
		%	0.6	--	--	2.1	--	--	--	7.3

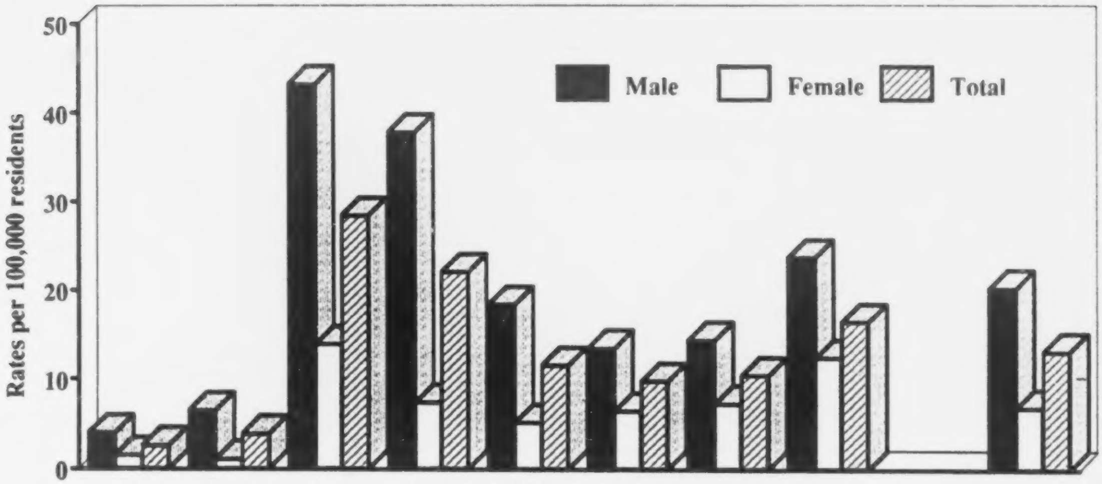
*Percents may not sum to 100.0 due to rounding.
-- indicate zero events.

FIGURE C-3

Motor Vehicle Deaths

Age-specific Rates

Massachusetts: 1988



	0-9	10-14	15-19	20-29	30-44	45-54	55-64	65+	State Total
Male	4.0	6.6	43.2	37.8	18.4	13.5	14.4	23.7	20.3
Female	1.5	1.1	13.9	7.4	5.2	6.5	7.3	12.4	6.9
Total	2.6	3.9	28.4	22.1	11.6	9.8	10.5	16.5	13.2

Age-specific populations are estimated by the Massachusetts Department of Public Health based on 1980 census counts and 1990 projections from the Massachusetts Institute for Social and Economic Research (MISER).

TABLE C-10
AIDS AND HIV - RELATED DEATHS
BY CAUSE, SEX AND RACE
MASSACHUSETTS RESIDENT DEATHS
1987-1988

		AIDS and AIDS-related Deaths	Conditions (ICD-9)			Sex		Race			Age (in years)					Place of Occurrence			
		Total	AIDS 042	AIDS-like syndrome 043	Other HIV infection 044	Male	Female	White	Black	Other	<14	14-24	25-34	35-44	45+	At Home	Hospital	En Route	Out of State
1987	Number	241	233	3	5	209	32	190	50	1	5	8	105	78	45	26	207	3	5
	Percent	100.0	96.7	1.2	2.1	86.7	13.3	78.8	20.8	0.4	2.1	3.3	43.6	32.3	18.7	10.8	85.9	1.2	2.1
1988	Number	315	303	3	9	281	34	251	64	0	5	12	111	127	60	67	234	7	7
	Percent	100.0	96.2	0.9	2.9	89.2	10.8	79.7	20.3	0.0	1.6	3.8	35.2	40.3	19.1	21.3	74.3	2.2	2.2

FIGURE C - 4

Heart Disease Deaths by Race and Sex
Age-adjusted Rates
Massachusetts: 1970 - 1988

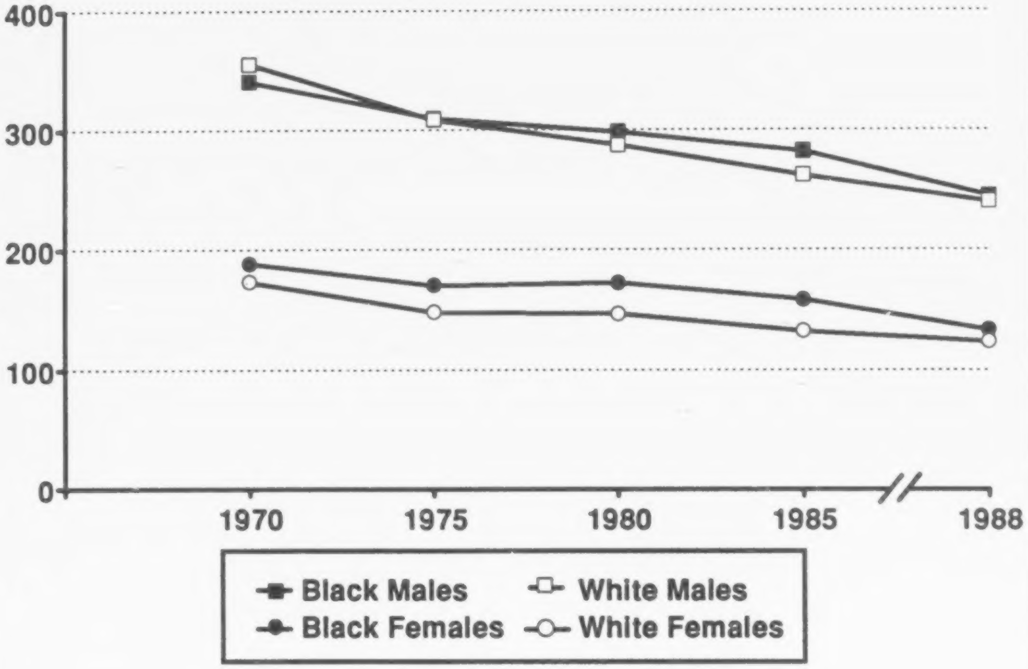


TABLE C-11
MALIGNANT NEOPLASM DEATHS
AGE-ADJUSTED RATES
MASSACHUSETTS RESIDENT DEATHS
1988

Cause		Total		Male		Female	
		Rate	Number	Rate	Number	Rate	Number
Total Deaths	ICD-9	533.3	56,407	704.3	27,287	409.2	29,120
Total Malignant Neoplasm Deaths (Underlying Cause)	140-208	137.8	13,142	171.2	6,560	117.4	6,582
Esophagus	150	3.1	284	5.3	188	1.5	96
Stomach	151	4.1	416	5.6	217	3.0	199
Colon, rectum, rectosigmoid junction, and anus	153-154	15.7	1,673	20.2	811	12.9	862
Pancreas	157	5.9	600	6.9	262	5.1	338
Trachea, bronchus, and lung	162	36.4	3,309	54.9	2,058	24.0	1,251
Female breast	174	25.5	1,285	--	--	25.5	1,285
Ovary and other uterine adnexa	183	6.9	346	--	--	6.9	346
Prostate	185	15.5	710	15.5	710	--	--
Brain	191	3.5	274	4.0	131	3.2	143
Lymphosarcoma & reticulosarcoma, Hodgkin's disease, and other malignant neoplasms of lymphoid & histiocytic tissue	200-202	5.1	493	6.8	246	3.9	247
All other malignant neoplasms	Residual	39.8	3,752	52.0	1,937	31.5	1,815

--Indicates zero events.

TABLE C-12
MEDICAL EXAMINER CERTIFIED DEATHS BY CAUSE, RACE, SEX AND AGE MASSACHUSETTS OCCURRENCE 1988

AGE	RACE/SEX		Total Deaths Certified by M.E.	Motor Vehicle Injuries (E810-E825)	Suicide (E950-E959)	Homicide (E960-E969)	Legal Intervention/ Undeter. Inj. (E970-E999)	All Other Injuries (E800-E807, E826-E949)	Non-violent Causes (000-778)	Ill-Defined & Unknown Causes (780-796)
Total	White	M	5,411	503	364	89	134	347	3,764	210
		F	3,367	199	118	49	36	197	2,661	107
	Non-W	M	436	35	15	76	17	37	207	49
		F	215	8	7	16	5	12	144	23
	Total*		9,430*	745	504	230	193*	593**	6,776***	389**
<1	White	M	70	1	--	3	--	2	16	48
		F	36	1	--	3	--	3	9	20
	Non-W	M	26	--	--	2	--	1	7	16
		F	19	--	--	--	--	--	6	13
	Total		151	2	--	8	--	6	38	97
1-4	White	M	22	6	--	3	--	7	5	1
		F	18	2	--	2	1	9	2	2
	Non-W	M	8	2	--	2	--	3	1	--
		F	2	--	--	--	--	1	1	--
	Total		50	10	--	7	1	20	9	3
5-9	White	M	23	5	--	2	--	10	4	2
		F	11	3	--	--	--	5	2	1
	Non-W	M	11	1	--	2	--	7	1	--
		F	3	1	--	--	--	2	--	--
	Total		48	10	--	4	--	24	7	3
10-14	White	M	19	11	1	--	--	3	3	1
		F	5	2	--	1	1	1	--	--
	Non-W	M	3	--	--	--	--	2	--	1
		F	3	1	--	1	--	--	--	1
	Total		30	14	1	2	1	6	3	3
15-19	White	M	148	85	29	3	6	14	8	3
		F	50	23	9	4	3	7	3	1
	Non-W	M	26	2	2	17	2	2	1	--
		F	6	2	--	--	1	2	1	--
	Total		230	112	40	24	12	25	13	4
20-29	White	M	472	157	89	35	40	60	51	40
		F	131	33	18	19	10	14	22	15
	Non-W	M	69	11	4	33	6	4	4	7
		F	23	3	3	6	--	3	4	4
	Total		695	204	114	93	56	81	81	66
30-39	White	M	506	76	76	20	62	63	147	62
		F	121	21	20	11	8	10	34	17
	Non-W	M	71	11	6	14	5	4	18	13
		F	19	--	2	5	1	--	7	4
	Total		717	108	104	50	76	77	206	96
40-44	White	M	247	31	35	6	9	23	123	20
		F	84	14	8	2	2	11	38	9
	Non-W	M	34	3	2	--	2	3	19	5
		F	10	--	2	4	1	--	2	1
	Total		375	48	47	12	14	37	182	35
45-49	White	M	270	17	31	3	3	18	185	13
		F	87	8	15	1	4	5	46	8
	Non-W	M	23	2	--	4	1	1	11	4
		F	8	--	--	--	--	--	8	--
	Total		388	27	46	8	8	24	250	25

*Total includes one male of unknown race and age.

**Total for this category includes one white male of unknown age.

***Total for this category includes one white male and one non-white male of unknown age.

Of the 651 non-white deaths certified by medical examiners, 579 were black and 72 were classified as Asian or other.

-- Indicates zero events.

TABLE C-12 (continued)
MEDICAL EXAMINER CERTIFIED DEATHS
BY CAUSE, RACE, SEX AND AGE
MASSACHUSETTS OCCURRENCE
1988

AGE	RACE/SEX		Total Deaths Certified by M.E.	Motor Vehicle Injuries (E810-E825)	Suicide (E950-E959)	Homicide (E960-E969)	Legal Intervention/ Undeter. Inj. (E970-E999)	All Other Injuries (E800-E807, E826-E949)	Non-violent Causes (000-778)	Ill-Defined & Unknown Causes (780-796)
50-54	White	M	263	18	18	2	4	14	204	3
		F	97	12	10	1	1	2	64	7
	Non-W	M	20	1	--	--	--	1	18	--
		F	14	--	--	--	1	--	13	--
	Total		394	31	28	3	6	17	299	10
55-59	White	M	400	14	15	5	3	17	343	3
		F	175	13	12	1	1	5	139	4
	Non-W	M	26	--	--	2	1	4	18	1
		F	11	--	--	--	--	--	11	--
	Total		612	27	27	8	5	26	511	8
60-64	White	M	544	18	14	2	2	20	484	4
		F	200	9	3	1	1	11	167	8
	Non-W	M	33	--	1	--	--	--	31	1
		F	9	--	--	--	--	--	9	--
	Total		786	27	18	3	3	31	691	13
65-69	White	M	580	16	17	2	2	10	531	2
		F	325	14	6	1	1	14	289	--
	Non-W	M	34	1	--	--	--	1	32	--
		F	19	--	--	--	--	--	19	--
	Total		958	31	23	3	3	25	871	2
70-74	White	M	584	14	13	2	2	20	529	4
		F	403	16	4	1	1	17	360	4
	Non-W	M	21	--	--	--	--	1	20	--
		F	15	--	--	--	1	1	13	--
	Total		1,023	30	17	3	4	39	922	8
75-79	White	M	516	11	7	1	1	14	481	1
		F	448	11	3	--	--	20	410	4
	Non-W	M	10	--	--	--	--	--	10	--
		F	18	--	--	--	--	1	17	--
	Total		992	22	10	1	1	35	918	5
≥80	White	M	744	23	19	--	--	51	649	2
		F	1,176	17	10	1	2	63	1,076	7
	Non-W	M	20	1	--	--	--	3	15	1
		F	36	1	--	--	--	2	33	--
	Total		1,976	42	29	1	2	119	1,773	10

FIGURE C - 5

Malignant Neoplasm Deaths by Race and Sex
Age-adjusted Rates
Massachusetts: 1970 - 1988

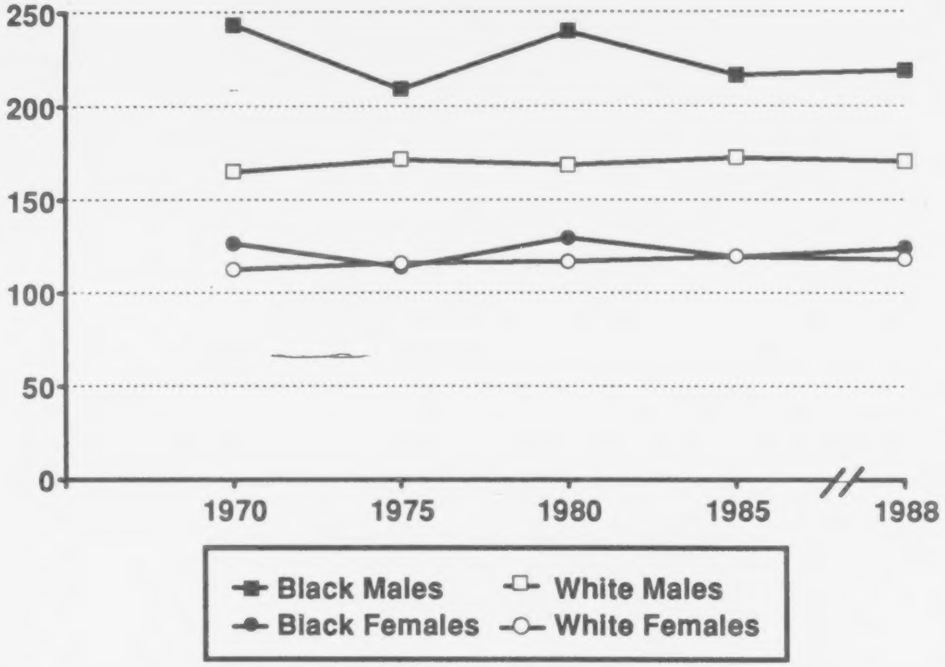


FIGURE C-6

PROPORTION OF DEATHS CERTIFIED BY MEDICAL EXAMINER FOR SPECIFIC CAUSES OF DEATH

OCCURRENCE DEATHS

MASSACHUSETTS:1988

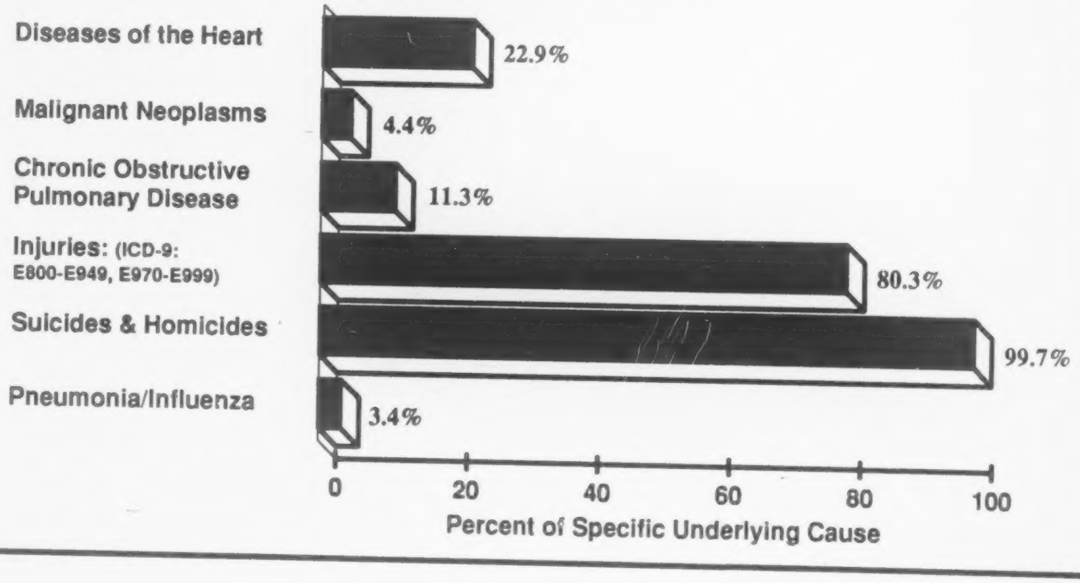


TABLE C-13
MEDICAL EXAMINER CERTIFIED DEATHS BY COUNTY
MASSACHUSETTS OCCURRENCE
1988

County		Population	Occurrence Deaths	Medical Examiner Certified*	Referred--Not Cert. By M.E.*	Natural Cause Deaths Cert. by M.E.**
TOTAL	#	5,860,283	57,024	9,430	6,743	6,776
	%	100.0+	100.0+	16.5	11.8	71.9
	R	--	--	--	--	--
Barnstable	#	177,407	2,123	443	150	353
	%	3.0	3.7	20.9	7.1	79.7
	R	9	9	2	11	5
Berkshire	#	141,188	1,617	222	229	126
	%	2.4	2.8	13.7	14.2	56.8
	R	11	10	9	4	12
Bristol	#	490,518	4,496	844	373	634
	%	8.4	7.9	18.8	8.3	75.1
	R	6	7	5	9	6
Dukes	#	11,378	92	15	2	12
	%	0.2	0.2	16.3	2.2	80.0
	R	13	13	7	13	4
Essex	#	645,672	6,125	1,181	275	946
	%	11.0	10.7	19.3	4.5	80.1
	R	4	4	4	12	3
Franklin	#	66,619	612	85	66	58
	%	1.1	1.1	13.9	10.8	68.2
	R	12	12	8	7	9
Hampden	#	441,172	5,081	686	752	440
	%	7.5	8.9	13.5	14.8	64.1
	R	7	5	10	3	11
Hampshire	#	146,512	873	108	114	70
	%	2.5	1.5	12.4	13.1	64.8
	R	10	11	12	5	10
Middlesex	#	1,366,365	11,352	2,344	914	1,927
	%	23.3	19.9	20.6	8.1	82.2
	R	1	1	3	10	1
Nantucket	#	6,116	61	10	0	7
	%	0.1	0.1	16.4	0.0	70.0
	R	14	14	6	14	8
Norfolk	#	603,952	4,733	660	592	468
	%	10.3	8.3	13.9	12.5	70.9
	R	5	6	8	6	7
Plymouth	#	440,583	3,146	818	325	667
	%	7.5	5.5	26.0	10.3	81.5
	R	8	8	1	8	2
Suffolk	#	660,401	10,059	1,330	1,772	721
	%	11.3	17.6	13.2	17.6	54.2
	R	3	2	11	2	13
Worcester	#	662,400	6,654	684	1,179	347
	%	11.3	11.7	10.3	17.7	50.7
	R	2	3	13	1	14

*The percentage and rank in the Medical Examiner Certified Deaths and the Referred--Not Certified by Medical Examiner columns are based on the totals in the Occurrence Deaths Columns.

**The percentage and rank of natural cause deaths certified by medical examiners is based on the total number of medical examiner certified deaths for the county.

+Percents do not sum to 100.0 due to rounding.

TABLE C-14A
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE
1988

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
ABINGTON	38	26	6	1	0	8	4	2	1	2	2	20	110
ACTON	19	18	4	2	0	7	3	1	1	1	1	16	73
ACUSHNET	32	16	8	2	1	1	5	0	0	5	0	10	80
ADAMS	43	28	7	1	5	2	6	1	0	0	1	25	119
AGAWAM	90	51	15	2	3	11	13	2	3	8	2	57	257
ALFORD	1	0	0	0	0	0	0	0	0	0	0	2	3
AMESBURY	47	33	6	2	5	4	9	3	1	2	2	17	131
AMHERST	34	27	6	0	2	4	4	2	2	0	1	23	105
ANDOVER	83	55	7	2	0	9	9	5	4	2	2	27	205
ARLINGTON	186	113	42	2	11	33	21	3	6	4	2	102	525
ASHBURNHAM	10	8	3	2	0	0	1	1	0	0	0	2	27
ASHBY	2	3	2	0	0	0	1	0	0	0	0	2	10
ASHFIELD	1	2	2	0	0	1	1	0	0	0	1	1	9
ASHLAND	18	14	3	2	0	3	6	2	2	0	1	12	63
ATHOL	40	32	8	0	2	7	6	4	0	3	2	22	126
ATTLEBORO	98	74	39	2	5	18	17	4	6	4	1	61	329
AUBURN	47	42	5	0	4	7	6	5	0	0	0	23	139
AVON	14	6	4	2	0	2	2	0	0	0	0	9	39
AYER	16	12	3	4	0	2	3	0	1	1	0	14	56
BARNSTABLE	151	126	44	6	7	27	19	19	3	11	4	92	509
BARRE	17	7	0	3	2	1	0	0	0	0	2	9	41
BECKET	4	4	1	1	1	0	0	0	0	0	0	3	14
BEDFORD	41	20	11	1	2	6	5	1	2	0	4	35	128
BELCHERTOWN	26	9	5	1	1	2	2	0	1	1	0	6	54
BELLINGHAM	30	18	5	1	1	1	4	0	0	0	1	23	84
BELMONT	106	70	16	1	8	20	11	6	4	0	2	39	283
BERKLEY	9	3	3	0	1	1	1	0	0	0	0	1	19
BERLIN	6	5	2	1	0	0	1	1	0	0	0	3	19
BERNARDSTON	2	3	1	1	0	0	0	1	0	1	0	2	11
BEVERLY	150	96	36	2	7	29	13	8	7	1	1	72	422
BILLERICA	80	43	11	6	3	4	11	5	6	1	1	32	203
BLACKSTONE	25	15	2	2	5	0	1	0	1	0	0	11	62
BLANDFORD	1	2	1	0	0	0	1	1	0	0	0	0	6
BOLTON	6	3	0	0	0	1	0	0	0	0	0	2	12
BOSTON	1845	1202	321	58	119	290	178	74	62	20	47	1454	5670
BOURNE	64	47	11	4	1	7	2	1	0	0	0	28	165
BOXBOROUGH	5	4	1	0	1	0	0	1	0	0	1	2	15
BOXFORD	8	10	0	0	1	3	1	0	0	0	0	5	28
BOYLSTON	12	5	2	0	1	2	3	0	0	0	0	5	30
BRAINTREE	155	87	36	5	8	33	8	10	3	1	2	70	418

BREWSTER	32	22	6	0	0	3	2	3	0	6	1	16	91
BRIDGEWATER	52	15	9	3	0	6	5	0	2	0	1	14	107
BRIMFIELD	5	3	2	0	0	2	1	0	0	0	0	1	14
BROCKTON	358	202	50	15	21	51	32	5	12	3	1	180	930
BROOKFIELD	8	7	0	2	0	1	0	0	0	0	0	5	23
BROOKLINE	189	146	34	4	8	41	16	8	7	2	4	100	559
BUCKLAND	8	3	2	0	0	1	1	0	0	0	0	3	18
BURLINGTON	40	41	3	2	1	2	4	1	1	2	1	17	115
CAMBRIDGE	273	171	43	4	13	33	18	18	10	3	5	161	752
CANTON	79	44	8	1	3	5	8	2	1	3	1	25	180
CARLISLE	7	4	1	1	3	1	0	0	0	0	0	3	20
CARVER	25	32	3	1	1	5	2	1	0	1	2	9	82
CHARLEMONT	5	4	3	1	0	2	0	2	0	0	0	2	19
CHARLTON	27	12	5	2	1	2	4	2	0	0	0	11	66
CHATHAM	34	28	10	1	1	2	6	1	3	8	0	19	113
CHELMSFORD	84	60	22	4	2	8	14	5	3	4	4	37	247
CHELSEA	122	80	15	3	6	15	12	4	5	3	1	76	342
CHESHIRE	6	5	1	0	1	3	2	1	0	0	0	3	22
CHESTER	4	0	0	0	0	0	0	1	0	0	0	2	7
CHESTERFIELD	0	3	1	0	0	1	0	0	0	0	0	0	5
CHICOPEE	264	114	45	6	8	24	28	9	10	8	3	100	619
CHILMARK	2	3	0	0	0	0	1	0	0	0	0	0	6
CLARKSBURG	5	4	0	0	0	0	0	1	3	0	0	2	15
CLINTON	66	43	6	1	2	5	5	3	2	2	0	26	161
COHASSET	21	13	1	0	0	3	1	1	2	0	1	14	57
COLRAIN	8	2	2	3	1	1	2	0	0	0	0	1	20
CONCORD	47	18	16	1	3	4	4	0	3	3	0	25	124
CONWAY	2	2	1	1	0	0	1	1	0	0	0	1	9
CUMMINGTON	5	0	0	0	0	1	0	0	0	0	0	1	7
DALTON	29	13	4	1	0	1	2	2	0	3	1	14	70
DANVERS	116	66	20	1	3	23	9	3	7	1	1	44	294
DARTMOUTH	92	54	19	2	7	8	9	9	8	12	4	42	266
DEDHAM	98	58	20	3	0	9	8	3	3	1	1	44	248
DEERFIELD	13	13	5	0	1	5	0	1	0	0	0	7	45
DENNIS	57	76	18	4	5	14	9	6	0	11	6	35	241
DIGHTON	21	11	4	1	0	2	0	1	0	1	0	6	47
DOUGLAS	17	9	1	0	2	3	1	0	1	1	1	6	42
DOVER	13	8	4	0	0	1	2	1	0	0	1	4	34
DRACUT	87	39	8	3	1	7	6	5	6	3	0	36	201
DUDLEY	35	17	4	0	0	1	2	0	3	2	0	16	80
DUNSTABLE	3	5	0	0	1	0	1	0	0	0	0	2	12
DUXBURY	32	21	6	1	2	6	3	0	1	1	1	20	94
EAST BRIDGEWATER	32	13	3	0	1	2	4	2	1	0	2	18	78
EAST BROOKFIELD	10	4	0	1	0	0	1	0	0	0	0	1	17
EAST LONGMEADOW	52	37	5	2	1	3	10	2	0	3	0	30	145
EASTHAM	15	21	1	1	0	0	2	1	0	2	0	15	58
EASTHAMPTON	73	43	8	4	0	6	4	1	2	2	2	28	173
EASTON	59	24	4	3	3	12	1	1	0	2	2	16	127
EDGARTOWN	9	11	0	1	1	2	2	1	0	1	1	5	34
EGREMONT	3	6	2	0	1	2	0	0	0	1	0	3	18

TABLE C-14A (CONTINUED)
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE
1988

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
ERVING	5	4	0	0	1	1	0	0	0	0	0	2	13
ESSEX	10	6	5	0	0	1	0	0	0	0	0	6	28
EVERETT	154	103	26	3	10	19	13	5	9	1	6	73	422
FAIRHAVEN	89	49	24	2	0	9	2	2	3	13	0	16	209
FALL RIVER	488	265	81	7	18	40	34	32	15	3	14	141	1138
FALMOUTH	109	82	26	6	8	19	8	5	5	5	4	54	331
FITCHBURG	169	90	29	6	4	13	19	9	3	4	2	85	433
FLORIDA	1	2	0	0	0	0	1	0	0	0	0	1	5
FOXBOROUGH	34	30	10	2	1	7	3	1	0	2	1	20	111
FRAMINGHAM	186	126	41	7	10	28	18	9	13	1	5	132	576
FRANKLIN	37	35	2	2	3	4	3	0	2	1	1	23	113
FREETOWN	16	10	1	1	2	1	1	0	0	1	1	6	40
GARDNER	97	49	12	4	9	11	6	6	2	0	0	30	226
GAY HEAD	0	1	0	0	0	0	0	0	0	0	0	0	1
GEORGETOWN	17	15	1	2	1	0	3	1	0	0	0	4	44
GILL	3	1	0	0	1	0	0	0	0	0	1	1	7
GLOUCESTER	93	68	20	1	6	7	13	7	4	1	3	59	282
GOSHEN	2	0	0	0	0	0	0	0	0	0	1	2	5
GOSNOLD	2	2	0	0	0	0	0	0	0	0	0	0	4
GRAFTON	32	29	6	2	1	5	1	1	0	0	1	14	92
GRANBY	20	8	3	1	0	3	4	1	0	0	1	6	47
GRANVILLE	3	3	0	0	0	0	0	0	0	0	0	4	10
GREAT BARRINGTON	33	14	7	1	2	5	6	2	1	6	2	19	98
GREENFIELD	93	56	16	2	2	8	4	3	3	2	2	45	236
GROTON	17	13	0	0	1	1	0	0	0	1	1	14	48
GROVELAND	15	8	3	0	0	1	1	2	0	1	0	6	37
HADLEY	4	7	3	0	2	1	0	1	0	0	0	9	27
HALIFAX	21	17	4	4	0	5	0	0	2	2	1	3	59
HAMILTON	18	16	6	4	1	1	1	0	1	1	0	10	59
HAMPDEN	28	3	2	0	0	3	4	0	0	1	1	4	46
HANCOCK	3	1	0	0	0	1	0	0	0	0	0	1	6
HANOVER	21	26	3	2	0	2	1	1	1	1	0	20	78
HANSON	21	12	3	1	2	2	2	1	0	0	0	10	54
HARDWICK	10	7	6	0	0	1	0	0	0	0	0	2	26
HARVARD	4	2	1	1	1	0	0	0	0	0	1	9	19
HARWICH	35	38	8	2	5	4	4	7	0	12	2	26	143
HATFIELD	8	10	2	1	0	0	1	1	0	0	2	8	33
HAVERHILL	226	109	22	10	5	26	24	13	9	23	4	77	548
HAWLEY	0	1	0	0	0	0	0	0	0	0	0	0	1
HEATH	1	3	1	0	0	1	0	0	0	0	0	2	8

HINGHAM	51	46	15	3	5	8	5	2	0	2	2	26	165
HINSDALE	6	3	2	0	0	1	2	0	0	0	1	4	19
HOLBROOK	36	39	8	3	2	2	7	3	1	0	1	14	116
HOLDEN	50	28	6	2	2	4	5	1	1	3	0	32	134
HOLLAND	5	5	1	2	0	0	0	1	0	0	0	5	19
HOLLISTON	12	16	2	1	0	5	3	0	0	0	1	11	51
HOLYOKE	260	128	54	7	9	32	29	6	16	8	12	123	684
HOPEDALE	15	12	0	0	1	8	4	0	0	0	0	9	49
HOPKINTON	15	13	2	0	4	5	4	1	1	1	0	14	60
HUBBARDSTON	8	3	0	1	0	0	2	0	0	0	1	5	20
HUDSON	53	27	6	5	1	8	6	0	1	1	2	15	125
HULL	28	19	4	3	0	3	3	3	1	0	1	7	72
HUNTINGTON	2	7	0	0	0	3	1	0	1	0	0	3	17
IPSWICH	36	28	6	3	1	5	8	3	1	0	3	20	114
KINGSTON	18	14	7	2	1	5	1	1	1	0	0	10	60
LAKEVILLE	20	16	4	5	0	3	1	0	0	2	0	10	61
LANCASTER	15	10	3	1	2	2	1	1	0	0	1	10	46
LANESBOROUGH	8	6	0	1	0	1	0	1	0	1	1	2	21
LAWRENCE	243	149	44	11	11	27	33	6	11	9	7	107	658
LEE	21	10	5	1	2	5	2	0	1	0	0	12	59
LEICESTER	31	22	7	1	2	1	2	0	0	1	1	13	81
LENOX	25	12	3	1	1	8	1	1	1	2	2	11	68
LEOMINSTER	122	68	36	5	6	8	11	3	4	2	4	59	328
LEVERETT	1	3	1	0	0	0	0	0	0	0	0	1	6
LEXINGTON	82	71	15	3	3	11	11	2	2	0	3	40	243
LEYDEN	1	1	1	0	0	0	0	0	0	0	0	0	3
LINCOLN	6	7	4	1	1	3	1	1	1	0	1	6	32
LITTLETON	16	15	8	0	1	2	2	2	1	1	1	6	55
LONGMEADOW	66	34	13	6	0	1	3	0	2	2	1	28	156
LOWELL	369	226	70	10	20	34	39	24	31	19	12	179	1033
LUDLOW	54	43	9	3	5	5	5	2	4	0	2	19	151
LUNENBURG	21	14	5	1	2	1	1	0	2	0	0	7	54
LYNN	346	225	64	8	12	32	49	14	16	3	6	153	928
LYNNFIELD	33	24	2	1	0	3	1	0	1	1	1	16	83
MALDEN	219	122	32	9	16	15	24	6	6	5	3	96	553
MANCHESTER	14	11	2	0	0	3	1	0	1	0	0	8	40
MANSFIELD	29	19	10	1	1	5	3	0	0	0	2	19	89
MARBLEHEAD	66	45	13	1	4	7	8	2	3	0	3	29	181
MARION	15	8	3	0	0	0	1	0	0	0	0	4	31
MARLBOROUGH	105	60	17	5	5	16	11	5	2	2	6	55	289
MARSHFIELD	40	41	9	2	4	5	4	2	0	2	1	24	134
MASHPEE	19	17	3	1	1	2	1	0	2	1	0	12	59
MATTAPOISETT	31	15	6	3	1	2	2	0	0	1	0	4	65
MAYNARD	28	32	5	3	3	5	1	2	1	0	2	18	100
MEDFIELD	25	22	4	0	0	3	3	2	0	1	0	8	68
MEDFORD	242	156	40	4	13	26	32	10	4	6	3	105	641
MEDWAY	25	15	1	0	0	2	1	0	0	0	0	11	55
MELROSE	115	73	30	4	4	7	10	6	7	6	1	58	321
MENDON	9	3	0	0	1	2	1	0	1	0	0	4	21
MERRIMAC	14	12	2	0	1	0	1	0	0	2	0	3	35

TABLE C-14A (CONTINUED)
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE
1988

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
METHUEN	155	118	27	2	5	14	16	9	6	5	2	49	408
MIDDLEBOROUGH	64	32	9	2	0	5	4	8	2	4	2	25	157
MIDDLEFIELD	0	0	0	0	0	0	0	0	0	1	0	0	1
MIDDLETON	12	7	1	2	1	2	0	0	1	0	1	6	33
MILFORD	68	48	9	2	0	6	7	3	0	0	4	40	187
MILLBURY	38	27	4	0	3	5	4	5	0	0	1	16	103
MILLIS	8	12	0	3	1	2	0	1	1	0	0	10	38
MILLVILLE	6	4	3	1	0	1	1	1	0	0	1	3	21
MILTON	107	52	17	2	5	14	5	4	3	0	2	60	271
MONROE	0	0	0	0	0	0	0	0	0	0	0	0	0
MONSON	17	15	6	1	0	1	2	1	1	0	0	10	54
MONTAGUE	45	19	5	1	1	5	9	4	2	0	0	19	110
MONTERY	5	0	0	1	1	1	0	1	0	0	0	1	10
MONTGOMERY	6	1	0	1	0	0	0	0	0	0	0	0	8
MOUNT WASHINGTON	1	0	0	0	0	0	0	0	1	0	0	0	2
NAHANT	14	14	2	0	0	1	2	0	0	0	0	6	39
NANTUCKET	21	21	2	0	0	4	2	4	2	0	1	12	69
NATICK	86	54	14	2	5	12	8	4	6	2	2	58	253
NEEDHAM	93	67	26	4	4	17	7	5	1	2	1	57	284
NEW ASHFORD	1	0	0	0	0	1	0	0	0	0	0	0	2
NEW BEDFORD	415	278	107	14	19	32	44	20	19	83	16	177	1224
NEW BRAINTREE	2	3	0	0	0	0	0	0	1	0	0	0	6
NEW MARLBOROUGH	2	4	2	0	0	1	0	1	0	0	0	0	10
NEW SALEM	2	1	0	1	0	0	0	0	0	0	0	1	5
NEWBURY	12	10	1	1	0	1	0	1	1	1	1	4	33
NEWBURYPORT	64	46	12	2	0	8	10	2	2	2	2	40	190
NEWTON	253	177	33	7	13	25	20	11	5	2	5	120	671
NORFOLK	15	8	0	1	0	3	1	0	0	0	0	8	36
NORTH ADAMS	81	29	13	7	6	7	11	1	2	3	3	32	195
NORTH ANDOVER	73	41	13	4	3	8	7	5	2	3	4	27	190
NORTH ATTLEBORO	62	53	22	6	2	5	7	3	3	1	0	36	200
NORTH BROOKFIELD	12	8	2	1	1	2	3	1	1	1	0	6	38
NORTH READING	26	18	4	4	0	4	3	1	0	1	2	7	70
NORTHAMPTON	101	87	19	1	3	12	22	3	7	1	6	51	313
NORTHBOROUGH	26	17	6	0	4	4	3	0	2	1	1	16	80
NORTHBRIDGE	48	35	5	1	2	9	6	0	2	0	0	17	125
NORTHFIELD	9	3	1	0	1	0	2	0	0	0	0	6	22
NORTON	24	25	13	0	1	4	5	2	3	3	0	10	90
NORWELL	21	17	8	1	2	4	2	1	2	3	0	12	73
NORWOOD	108	77	36	3	3	15	10	4	3	2	2	46	309

OAK BLUFFS	8	7	3	0	0	0	2	1	1	2	0	2	26
OAKHAM	1	2	0	0	0	0	0	0	0	0	1	2	6
ORANGE	27	23	4	5	5	3	5	0	1	0	1	9	83
ORLEANS	21	18	12	2	0	2	4	2	2	4	1	10	78
OTIS	3	2	1	1	0	0	1	0	0	0	0	1	9
OXFORD	27	20	6	0	1	1	6	3	1	1	2	20	88
PALMER	35	27	8	2	0	5	10	3	1	0	0	17	108
PAXTON	8	11	3	0	1	3	0	1	0	0	0	2	29
PEABODY	150	104	27	6	4	20	6	5	9	3	5	70	409
PELHAM	1	2	1	0	0	0	1	1	0	0	0	1	7
PEMBROKE	26	22	4	8	2	6	0	2	1	0	1	14	86
PEPPERELL	19	6	6	3	2	4	4	0	3	0	0	8	55
PERU	0	1	0	0	0	0	0	0	0	0	0	0	1
PETERSHAM	3	2	0	1	0	0	0	0	0	0	0	1	7
PHILLIPSTON	2	2	0	1	1	0	0	0	1	0	0	1	8
PITTSFIELD	246	113	28	13	10	27	14	12	2	4	5	96	570
PLAINFIELD	1	1	0	1	0	0	0	0	0	0	0	1	4
PLAINVILLE	7	19	6	3	0	0	0	0	1	0	0	11	47
PLYMOUTH	137	85	13	6	9	13	12	7	3	8	2	83	378
PLYMPTON	3	2	0	0	0	1	0	0	0	0	0	1	7
PRINCETON	3	1	0	2	1	0	1	2	0	0	0	2	12
PROVINCETOWN	16	10	2	1	1	1	2	0	0	0	0	19	52
QUINCY	347	256	72	15	12	51	24	12	6	4	6	172	977
RANDOLPH	104	76	21	4	4	11	7	3	6	3	3	45	287
RAYNHAM	29	26	1	1	1	1	6	1	0	0	0	12	78
READING	60	40	10	2	2	4	5	4	1	0	1	27	156
REHOBOTH	15	15	0	1	3	2	1	1	0	0	0	9	47
REVERE	169	104	23	7	11	20	15	8	6	3	5	88	459
RICHMOND	2	2	0	0	1	0	1	0	0	0	0	4	10
ROCHESTER	8	5	0	0	0	0	1	1	1	0	0	2	18
ROCKLAND	51	28	12	2	0	5	6	2	3	3	0	18	130
ROCKPORT	28	24	8	0	1	5	3	2	1	0	1	15	88
ROWE	2	2	0	0	0	0	0	0	0	0	0	1	5
ROWLEY	16	6	0	1	1	1	2	1	0	0	0	5	33
ROYALSTON	2	3	0	0	1	0	0	1	0	0	0	4	11
RUSSELL	0	1	2	0	0	0	1	0	0	0	0	0	4
RUTLAND	10	6	2	1	1	3	0	1	0	0	0	4	28
SALEM	126	104	30	4	6	10	14	6	7	0	3	72	382
SALISBURY	26	18	1	0	0	1	1	1	0	2	0	10	60
SANDISFIELD	4	4	1	0	0	0	0	0	0	1	0	1	11
SANDWICH	33	27	7	2	0	5	2	4	1	0	0	12	93
SAUGUS	89	57	15	1	4	12	12	4	3	4	2	31	234
SAVOY	0	2	0	0	0	0	0	0	0	0	0	0	2
SCITUATE	62	42	8	2	1	7	6	2	1	3	0	24	158
SEEKONK	30	16	7	2	4	3	3	1	2	1	0	13	82
SHARON	25	24	4	1	1	6	6	2	2	0	3	13	87
SHEFFIELD	5	5	2	4	0	1	2	0	0	0	1	5	25
SHELBURNE	10	2	3	1	0	2	2	0	0	1	0	4	25
SHERBORN	8	5	1	2	0	0	0	0	0	0	0	4	20
SHIRLEY	12	11	0	1	0	1	3	0	0	0	0	10	38

TABLE C-14A (CONTINUED)
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE
1988

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
SHREWSBURY	69	54	15	0	6	13	6	4	2	5	2	42	218
SHUTESBURY	2	2	0	0	0	0	0	0	0	0	0	2	6
SOMERSET	84	48	14	4	3	6	3	2	4	2	1	22	193
SOMERVILLE	286	185	40	6	13	27	34	19	10	5	9	146	780
SOUTH HADLEY	39	42	13	0	2	9	6	2	1	3	0	26	143
SOUTHAMPTON	14	3	0	2	1	0	2	0	0	0	0	2	24
SOUTHBOROUGH	12	9	2	0	1	2	0	0	0	0	2	8	36
SOUTHBRIDGE	60	51	17	3	0	7	5	7	3	0	2	43	198
SOUTHWICK	22	14	3	1	1	1	1	1	0	0	0	6	50
SPENCER	39	26	3	2	2	6	2	2	0	1	0	16	99
SPRINGFIELD	598	354	114	27	34	83	58	30	29	20	16	316	1679
STERLING	13	19	1	0	1	3	3	0	0	0	0	3	43
STOCKBRIDGE	9	7	3	3	2	4	1	0	1	0	2	3	35
STONEHAM	82	48	14	1	0	11	9	4	2	1	0	28	200
STOUGHTON	66	60	11	5	1	9	6	4	4	1	2	38	207
STOW	10	11	2	2	0	1	0	0	2	0	0	6	34
STURBRIDGE	22	13	3	2	0	1	2	1	1	0	0	10	55
SUDBURY	25	13	3	0	2	6	3	1	1	0	2	12	68
SUNDERLAND	9	8	1	0	0	3	2	0	0	0	0	6	29
SUTTON	14	13	3	0	1	2	0	2	1	0	0	3	39
SWAMPSCOTT	59	30	13	3	4	8	4	4	0	1	1	41	168
SWANSEA	44	29	5	2	4	4	2	2	3	0	1	17	113
TAUNTON	165	86	54	11	5	17	17	9	6	5	5	70	450
TEMPLETON	19	12	4	0	0	3	1	4	1	1	0	8	53
TEWKSBURY	64	39	12	5	1	3	5	5	1	1	1	33	170
TISBURY	14	10	1	0	0	1	3	1	1	0	0	5	36
TOLLAND	0	0	0	0	0	0	0	0	0	0	0	0	0
TOPSFIELD	14	15	2	1	0	2	1	0	0	0	0	3	38
TOWNSEND	11	8	1	3	1	1	0	1	0	0	0	7	33
TRURO	3	5	0	2	0	0	1	1	0	0	0	7	19
TYNGSBOROUGH	14	8	2	0	0	1	1	0	0	1	0	6	33
TRYINGHAM	2	4	0	0	0	0	0	0	0	0	0	0	6
UPTON	11	12	5	0	4	1	0	0	0	0	0	5	38
UXBRIDGE	26	21	5	0	2	1	10	2	0	1	0	14	82
WAKEFIELD	92	55	19	0	2	11	9	0	3	1	4	36	232
WALES	5	1	2	2	0	0	0	1	0	0	0	1	12
WALPOLE	52	38	8	2	3	5	6	1	0	0	1	26	142
WALTHAM	163	105	34	7	11	22	19	9	7	13	4	67	461
WARE	32	20	10	2	1	1	3	3	0	0	1	16	89
WAREHAM	70	67	14	3	2	13	7	3	4	1	1	29	214

WARREN	17	8	3	1	0	2	3	2	0	0	0	6	42
WARWICK	4	0	2	1	0	0	0	0	0	0	0	0	7
WASHINGTON	3	3	1	0	0	0	0	0	0	0	0	0	7
WATERTOWN	137	94	18	2	9	27	8	6	1	0	4	70	376
WAYLAND	31	31	5	1	2	1	3	3	1	1	0	9	88
WEBSTER	77	39	11	3	4	7	3	2	3	0	0	43	192
WELLESLEY	73	50	13	1	2	18	9	5	1	4	4	40	220
WELLFLEET	1	10	3	0	0	1	1	2	0	3	0	2	23
WENDELL	1	1	1	0	0	0	0	0	0	0	0	2	5
WENHAM	7	9	5	0	1	5	1	1	1	0	0	5	35
WEST BOYLSTON	12	12	6	0	2	2	0	0	0	1	0	11	46
WEST BRIDGEWATER	22	11	2	0	2	1	2	0	2	0	0	12	54
WEST BROOKFIELD	10	10	5	1	2	3	1	0	2	1	0	3	38
WEST NEWBURY	11	4	2	2	0	2	1	0	0	1	0	4	27
WEST SPRINGFIELD	103	71	23	4	6	13	16	5	2	0	5	43	291
WEST STOCKBRIDGE	6	5	0	0	0	0	0	1	1	1	0	1	15
WEST TISBURY	4	0	1	0	0	0	1	0	0	0	0	0	6
WESTBOROUGH	49	33	12	2	3	11	2	2	0	2	1	23	140
WESTFIELD	168	88	17	5	8	13	13	6	3	5	2	58	386
WESTFORD	31	23	7	0	4	1	2	1	1	1	3	14	88
WESTHAMPTON	2	2	2	0	0	0	0	0	0	0	0	0	6
WESTMINSTER	20	4	1	0	0	4	0	0	1	0	0	4	34
WESTON	33	19	5	1	1	3	2	1	2	0	2	17	86
WESTPORT	47	28	12	2	1	3	4	2	1	1	0	18	119
WESTWOOD	41	30	10	2	2	5	7	0	1	0	1	18	117
WEYMOUTH	188	156	35	6	10	26	20	4	5	4	3	95	552
WHATELY	0	3	0	0	0	0	1	0	0	0	1	4	9
WHITMAN	26	23	7	4	0	13	3	0	1	2	1	24	104
WILBRAHAM	42	17	12	3	2	2	4	0	2	1	0	18	103
WILLIAMSBURG	7	0	2	1	0	1	1	0	0	0	0	1	13
WILLIAMSTOWN	31	17	5	0	0	3	4	0	0	3	3	8	74
WILMINGTON	56	30	7	3	1	6	3	3	1	0	0	13	123
WINCHENDON	26	16	4	3	1	4	4	2	3	1	3	15	82
WINCHESTER	69	39	23	5	3	3	4	1	1	0	3	35	186
WINDSOR	1	0	0	0	0	0	0	0	0	0	0	2	3
WINTHROP	78	49	5	3	5	11	7	5	2	0	0	33	198
WOBURN	108	79	18	6	3	20	10	4	6	4	3	34	295
WORCESTER	715	377	119	19	43	108	72	32	27	20	19	444	1995
WORTHINGTON	0	0	0	0	0	0	1	0	0	0	0	0	1
WRENTHAM	17	16	7	0	4	4	3	0	2	2	2	5	62
YARMOUTH	93	86	29	5	4	8	12	10	4	12	5	49	317
STATE TOTAL	20224	13142	3731	775	967	2532	2021	921	724	630	500	10240	56407

TABLE C-14B
SELECTED CAUSES OF DEATH BY COUNTY OF RESIDENCE
1988

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
BARNSTABLE	683	613	180	37	33	95	75	62	20	75	23	396	2292
BERKSHIRE	590	306	88	36	33	74	56	25	13	25	22	256	1524
BRISTOL	1848	1129	428	64	81	174	165	92	73	137	47	702	4940
DUKES	39	34	5	1	1	3	9	3	2	3	1	12	113
ESSEX	2391	1583	418	77	88	281	264	108	99	69	55	1051	6484
FRANKLIN	254	162	52	17	13	33	30	12	6	4	6	122	711
HAMPDEN	1828	1012	334	74	77	199	199	71	73	56	44	842	4809
HAMPSHIRE	371	271	75	14	12	44	52	15	14	8	14	184	1074
MIDDLESEX	4309	2793	762	151	216	509	438	199	178	99	114	2124	11892
NANTUCKET	21	21	2	0	0	4	2	4	2	0	1	12	69
NORFOLK	2007	1462	403	75	78	299	177	76	55	33	44	1009	5718
PLYMOUTH	1293	857	212	74	56	181	113	46	42	41	21	623	3559
SUFFOLK	2214	1435	364	71	141	336	212	91	75	26	53	1651	6669
WORCESTER	2376	1464	408	84	138	300	229	117	72	54	55	1256	6553
STATE TOTAL	20224	13142	3731	775	967	2532	2021	921	724	630	500	10240	56407

TABLE C-15
RESIDENT DEATHS BY CAUSE, SEX, AND RACE
1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*001 139	I. INFECTIVE AND PARASITIC DISEASES	1302	716	586	1172	639	533	129	77	52
001-009	INTESTINAL INFECTIOUS DISEASES	12	5	7	12	5	7	0	0	0
004	OTHER SALMONELLA INFECTIONS	4	2	2	4	2	2	0	0	0
008	INTESTINAL INFECTIONS DUE TO OTHER ORGANISMS	7	2	5	7	2	5	0	0	0
009	ILL-DEFINED INTESTINAL INFECTIONS	1	1	0	1	1	0	0	0	0
010-018	TUBERCULOSIS	26	12	14	20	11	9	6	1	5
011	PULMONARY	17	9	8	12	8	4	5	1	4
013	MENINGES AND CENTRAL NERVOUS SYSTEM	1	0	1	1	0	1	0	0	0
016	GENITOURINARY SYSTEM	2	1	1	2	1	1	0	0	0
017	OTHER ORGANS	4	1	3	4	1	3	0	0	0
018	MILIARY	2	1	1	1	1	0	1	0	1
020-027	ZOONOTIC BACTERIAL DISEASES	2	1	1	2	1	1	0	0	0
027	OTHER ZOONOTIC BACTERIAL DISEASES	2	1	1	2	1	1	0	0	0
030-041	OTHER BACTERIAL DISEASES	781	325	456	733	301	432	47	24	23
031	DISEASES DUE TO OTHER MYCOBACTERIA	7	5	2	6	4	2	1	1	0
036	MENINGOCOCCAL INFECTION	7	4	3	3	2	1	4	2	2
038	SEPTICAEMIA	758	310	448	716	290	426	41	20	21
040	OTHER BACTERIAL DISEASES	1	1	0	1	1	0	0	0	0
041	BACTERIAL INFECTION IN CONDITIONS CLASSIFIED ELSEWHERE AND OF UNSPECIFIED SITE	8	5	3	7	4	3	1	1	0
042-044	AIDS, ARC AND ARV	315	281	34	251	237	14	64	44	20
042	AIDS	303	271	32	24[illegible]	230	14	59	41	18
043	ARC	3	2	1	2	2	0	1	0	1
044	ARV	9	8	1	5	5	0	4	3	1
045-049	POLIOMYELITIS AND OTHER ENTEROVIRUS DIS. OF CENTRAL NERVOUS SYSTEM	16	8	8	14	7	7	2	1	1
046	SLOW VIRUS INFECTION OF CENTRAL NERVOUS SYSTEM	10	3	7	8	2	6	2	1	1
047	MENINGITIS DUE TO ENTEROVIRUS	2	2	0	2	2	0	0	0	0
048	OTHER ENTEROVIRUS DISEASES OF CENTRAL NERVOUS SYSTEM	1	0	1	1	0	1	0	0	0
049	OTHER VIRAL DISEASES OF CENTRAL NERVOUS SYSTEM	3	3	0	3	3	0	0	0	0
050-057	VIRAL DISEASES ACCOMPANIED BY EXANTHEM	11	6	5	11	6	5	0	0	0
052	CHICKENPOX	1	0	1	1	0	1	0	0	0
053	HERPES ZOSTER	4	1	3	4	1	3	0	0	0
054	HERPES SIMPLEX	6	5	1	6	5	1	0	0	0
070-079	OTHER VIRAL DISEASES	44	20	24	44	20	24	0	0	0
070	VIRAL HEPATITIS	30	15	15	30	15	15	0	0	0
072	MUMPS	1	1	0	1	1	0	0	0	0
078	OTHER DISEASES DUE TO VIRUSES AND CHLAMYDIAE	5	2	3	5	2	3	0	0	0
079	VIRAL INFECTION IN CONDITIONS CLASSIFIED ELSEWHERE AND OF UNSPECIFIED SITE	8	2	6	8	2	6	0	0	0
090-099	SYPHILIS AND OTHER VENEREAL DISEASES	2	1	1	2	1	1	0	0	0
094	NEUROSYPHILIS	2	1	1	2	1	1	0	0	0
110-118	MYCOSES	37	20	17	32	17	15	5	3	2
112	CANDIDIASIS	22	13	9	19	10	9	3	3	0
117	OTHER MYCOSES	15	7	8	13	7	6	2	0	2
120-129	HELMINTHIASES	1	1	0	1	1	0	0	0	0
127	OTHER INTESTINAL HELMINTHIASES	1	1	0	1	1	0	0	0	0
130-136	OTHER INFECTIVE AND PARASITIC DISEASES	47	32	15	42	28	14	5	4	1
130	TOXOPLASMOSIS	3	1	2	3	1	2	0	0	0
135	SARCOIDOSIS	10	5	5	9	5	4	1	0	1

TABLE C-15

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	I. INFECTIVE AND PARASITIC DISEASES (CONTINUED)									
136	OTHER AND UNSPECIFIED INFECTIOUS AND PARASITIC DISEASES	34	26	8	30	22	8	4	4	0
137-139	LATE EFFECTS OF INFECTIOUS AND PARASITIC DISEASES	8	4	4	8	4	4	0	0	0
137	TUBERCULOSIS	1	1	0	1	1	0	0	0	0
138	ACUTE POLIOMYELITIS	7	3	4	7	3	4	0	0	0
*140 239	II. NEOPLASMS	13382	6668	6714	12886	6409	6477	491	257	234
140-149	MALIGNANT NEOPLASM OF LIP, ORAL CAVITY AND PHARYNX	241	154	87	233	148	85	8	6	2
140	LIP	2	0	2	2	0	2	0	0	0
141	TONGUE	67	42	25	64	40	24	3	2	1
142	MAJOR SALIVARY GLANDS	7	3	4	7	3	4	0	0	0
144	FLOOR OF MOUTH	9	7	2	9	7	2	0	0	0
145	OTHER AND UNSPECIFIED PARTS OF MOUTH	31	15	16	31	15	16	0	0	0
146	OROPHARYNX	34	27	7	34	27	7	0	0	0
147	NASOPHARYNX	27	15	12	23	12	11	4	3	1
148	HYPOPHARYNX	20	13	7	19	12	7	1	1	0
149	OTHER AND ILL-DEFINED SITES WITHIN THE LIP, ORAL CAVITY AND PHARYNX	44	32	12	44	32	12	0	0	0
150-159	MALIGNANT NEOPLASM OF DIGESTIVE ORGANS AND PERITONEUM	3369	1673	1696	3226	1592	1634	143	81	62
150	OESOPHAGUS	284	188	96	257	167	90	27	21	6
151	STOMACH	416	217	199	400	209	191	16	8	8
152	SMALL INTESTINE, INCLUDING DUODENUM	23	10	13	23	10	13	0	0	0
153	COLON	1401	671	730	1351	649	702	50	22	28
154	RECTUM, RECTOSIGMOID JUNCTION AND ANUS	272	140	132	267	136	131	5	4	1
155	LIVER AND INTRAHEPATIC BILE DUCTS	198	119	79	185	108	77	13	11	2
156	GALLBLADDER AND EXTRAHEPATIC BILE DUCTS	108	38	70	103	37	66	5	1	4
157	PANCREAS	600	262	338	575	250	325	25	12	13
158	RETROPERITONEUM AND PERITONEUM	20	10	10	19	9	10	1	1	0
159	OTHER AND ILL-DEFINED SITES WITHIN THE DIGESTIVE ORGANS AND PERITONEUM	47	18	29	46	17	29	1	1	0
160-165	MALIGNANT NEOPLASM OF RESPIRATORY AND INTRATHORACIC ORGANS	3436	2160	1276	3321	2084	1237	114	76	38
160	NASAL CAVITIES, MIDDLE EAR AND ACCESSORY SINUSES	9	6	3	9	6	3	0	0	0
161	LARYNX	105	85	20	97	79	18	8	6	2
162	TRACHEA, BRONCHUS AND LUNG	3309	2058	1251	3202	1988	1214	106	70	36
163	PLEURA	8	8	0	8	8	0	0	0	0
164	THYMUS, HEART AND MEDIASTINUM	5	3	2	5	3	2	0	0	0
170-175	MALIGNANT NEOPLASM OF BONE, CONNECTIVE TISSUE, SKIN, AND BREAST	1635	200	1435	1579	194	1385	55	6	49
170	BONE AND ARTICULAR CARTILAGE	24	12	12	24	12	12	0	0	0
171	CONNECTIVE AND OTHER SOFT TISSUE	65	31	34	64	31	33	1	0	1
172	MALIGNANT MELANOMA OF SKIN	191	108	83	189	107	82	2	1	1
173	OTHER MALIGNANT NEOPLASM OF SKIN	61	40	21	54	35	19	7	5	2
174	FEMALE BREAST	1285	0	1285	1239	0	1239	45	0	45
175	MALE BREAST	9	9	0	9	9	0	0	0	0

TABLE C-15 (CONTINUED)

1988

ICD. LIST NUMBER	CAUSE OF DEATH II. NEOPLASMS (CONTINUED)	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	NON-WHITE TOT	NON-WHITE MALE	NON-WHITE FEM
179-189	MALIGNANT NEOPLASM OF GENITOURINARY ORGANS	1902	1052	850	1837	1018	819	64	33	31
179	UTERUS, PART UNSPECIFIED	52	0	52	50	0	50	2	0	2
180	CERVIX UTERI	93	0	93	87	0	87	6	0	6
182	BODY OF UTERUS	93	0	93	91	0	91	2	0	2
183	OVARY AND OTHER UTERINE ADNEXA	346	0	346	337	0	337	9	0	9
184	OTHER AND UNSPECIFIED FEMALE GENITAL ORGANS	40	0	40	39	0	39	1	0	1
185	PROSTATE	710	710	0	681	681	0	28	28	0
186	TESTIS	14	14	0	14	14	0	0	0	0
187	PENIS AND OTHER MALE GENITAL ORGANS	3	3	0	3	3	0	0	0	0
188	BLADDER	278	181	97	271	178	93	7	3	4
189	KIDNEY AND OTHER AND UNSPECIFIED URINARY ORGANS	273	144	129	264	142	122	9	2	7
190-199	MALIGNANT NEOPLASM OF OTHER AND UNSPECIFIED SITES	1428	725	703	1373	693	680	54	31	23
190	EYE	6	2	4	6	2	4	0	0	0
191	BRAIN	274	131	143	269	129	140	5	2	3
192	OTHER AND UNSPECIFIED PARTS OF NERVOUS SYSTEM	14	4	10	14	4	10	0	0	0
193	THYROID GLAND	29	11	18	27	10	17	2	1	1
194	OTHER ENDOCRINE GLANDS AND RELATED STRUCTURES	14	7	7	14	7	7	0	0	0
195	OTHER AND ILL-DEFINED SITES	92	51	41	88	48	40	4	3	1
199	WITHOUT SPECIFICATION OF SITE	999	519	480	955	493	462	43	25	18
200-208	NEOPLASMS OF LYMPHATIC AND HEMATOPOIETIC TISSUE	1131	596	535	1090	575	515	40	21	19
200	LYMPHOSARCOMA AND RETICULOSARCOMA	69	36	33	66	33	33	3	3	0
201	HODGKIN'S DISEASE	56	31	25	54	30	24	2	1	1
202	OTHER MALIGNANT NEOPLASM OF LYMPOID AND HISTIOCYTIC TISSUE	368	179	189	362	177	185	6	2	4
203	MULTIPLE MYELOMA AND IMMUNOPROLIFERATIVE NEOPLASMS	201	100	101	191	96	95	10	4	6
204	LYMPHOID LEUKAEMIA	117	64	53	111	60	51	5	4	1
205	MYELOID LEUKAEMIA	187	104	83	180	101	79	7	3	4
206	MONOCYTIC LEUKAEMIA	11	6	5	10	6	4	1	0	1
207	OTHER SPECIFIED LEUKAEMIA	8	7	1	8	7	1	0	0	0
208	LEUKAEMIA OF UNSPECIFIED CELL TYPE	114	69	45	108	65	43	6	4	2
210-229	BENIGN NEOPLASMS	44	16	28	40	16	24	4	0	4
211	OTHER PARTS OF DIGESTIVE SYSTEM	6	2	4	6	2	4	0	0	0
212	RESPIRATORY AND INTRATHORACIC ORGANS	1	0	1	1	0	1	0	0	0
215	OTHER BENIGN NEOPLASM OF CONNECTIVE AND OTHER SOFT TISSUE	1	0	1	1	0	1	0	0	0
220	OVARY	1	0	1	1	0	1	0	0	0
225	BRAIN AND OTHER PARTS OF NERVOUS SYSTEM	27	10	17	24	10	14	3	0	3
227	OTHER ENDOCRINE GLANDS AND RELATED STRUCTURES	6	3	3	5	3	2	1	0	1
228	HAEMANGIOMA AND LYMPHANGIOMA, ANY SITE	1	1	0	1	1	0	0	0	0
229	OTHER AND UNSPECIFIED SITES	1	0	1	1	0	1	0	0	0
230-234	CARCINOMA IN SITU	2	1	1	1	1	0	1	0	1
232	SKIN	1	0	1	0	0	0	1	0	1
233	BREAST AND GENITOURINARY SYSTEM	1	1	0	1	1	0	0	0	0
235-238	NEOPLASMS OF UNCERTAIN BEHAVIOUR	43	22	21	41	21	20	2	1	1
235	DIGESTIVE AND RESPIRATORY SYSTEMS	3	3	0	3	3	0	0	0	0

TABLE C-15

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	II. NEOPLASMS (CONTINUED)									
237	ENDOCRINE GLANDS AND NERVOUS SYSTEM	5	1	4	5	1	4	0	0	0
238	OTHER AND UNSPECIFIED SITES AND TISSUES	35	18	17	33	17	16	2	1	1
239-239	NEOPLASM OF UNSPECIFIED NATURE	151	69	82	145	67	78	6	2	4
239	NEOPLASM OF UNSPECIFIED NATURE	151	69	82	145	67	78	6	2	4
*240 279	III. ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES	1359	581	778	1304	559	745	55	22	33
240-246	DISORDERS OF THYROID GLAND	29	6	23	29	6	23	0	0	0
240	SIMPLE AND UNSPECIFIED GOITRE	1	0	1	1	0	1	0	0	0
241	NONTOXIC NODULAR GOITRE	2	1	1	2	1	1	0	0	0
242	THYROTOXICOSIS WITH OR WITHOUT GOITRE	3	0	3	3	0	3	0	0	0
244	ACQUIRED HYPOTHYROIDISM	23	5	18	23	5	18	0	0	0
250-259	DISEASES OF OTHER ENDOCRINE GLANDS	936	427	509	896	413	483	40	14	26
250	DIABETES MELLITUS	921	419	502	882	405	477	39	14	25
251	OTHER DISORDERS OF PANCREATIC INTERNAL SECRETION	5	3	2	4	3	1	1	0	1
252	DISORDERS OF PARATHYROID GLAND	2	2	0	2	2	0	0	0	0
253	DISORDERS OF THE PITUITARY GLAND AND ITS HYPOTHALAMIC CONTROL	2	1	1	2	1	1	0	0	0
255	DISORDERS OF ADRENAL GLANDS	4	2	2	4	2	2	0	0	0
258	POLYGLANDULAR DYSFUNCTION AND RELATED DISORDERS	1	0	1	1	0	1	0	0	0
259	OTHER ENDOCRINE DISORDERS	1	0	1	1	0	1	0	0	0
260-269	NUTRITIONAL DEFICIENCIES	73	28	45	70	28	42	3	0	3
261	NUTRITIONAL MARASMUS	5	2	3	5	2	3	0	0	0
263	OTHER AND UNSPECIFIED PROTEIN-CALORIE MALNUTRITION	61	22	39	58	22	36	3	0	3
265	THIAMINE AND NIACIN DEFICIENCY STATES	1	1	0	1	1	0	0	0	0
266	DEFICIENCY OF B-COMPLEX COMPONENTS	1	1	0	1	1	0	0	0	0
268	VITAMIN D DEFICIENCY	1	0	1	1	0	1	0	0	0
269	OTHER NUTRITIONAL DEFICIENCIES	4	2	2	4	2	2	0	0	0
270-279	OTHER METABOLIC AND IMMUNITY DISORDERS	321	120	201	309	112	197	12	8	4
272	DISORDERS OF LIPOID METABOLISM	17	10	7	16	9	7	1	1	0
273	DISORDERS OF PLASMA PROTEIN METABOLISM	19	5	14	19	5	14	0	0	0
274	GOUT	1	1	0	1	1	0	0	0	0
275	DISORDERS OF MINERAL METABOLISM	14	8	6	13	7	6	1	1	0
276	DISORDERS OF FLUID, ELECTROLYTE AND ACID-BASE BALANCE	201	62	139	196	60	136	5	2	3
277	OTHER AND UNSPECIFIED DISORDERS OF METABOLISM	38	16	22	36	15	21	2	1	1
278	OBESITY AND OTHER HYPERALIMENTATION	20	8	12	19	7	12	1	1	0
279	DISORDERS INVOLVING THE IMMUNE MECHANISM	11	10	1	9	8	1	2	2	0

TABLE C-15 (CONTINUED)

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*280 289	IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS	209	87	122	203	86	117	6	1	5
280	IRON DEFICIENCY ANAEMIAS	2	0	2	2	0	2	0	0	0
281	OTHER DEFICIENCY ANAEMIAS	4	1	3	4	1	3	0	0	0
282	HEREDITARY HAEMOLYTIC ANAEMIAS	3	1	2	3	1	2	0	0	0
283	ACQUIRED HAEMOLYTIC ANAEMIAS	9	2	7	9	2	7	0	0	0
284	APLASTIC ANAEMIA	37	16	21	37	16	21	0	0	0
285	OTHER AND UNSPECIFIED ANAEMIAS	45	13	32	43	13	30	2	0	2
286	COAGULATION DEFECTS	30	12	18	29	12	17	1	0	1
287	PURPURA AND OTHER HAEMORRHAGIC CONDITIONS	15	8	7	14	7	7	1	1	0
288	DISEASES OF WHITE BLOOD CELLS	13	8	5	13	8	5	0	0	0
289	OTHER DISEASES OF BLOOD AND BLOOD-FORMING ORGANS	51	26	25	49	26	23	2	0	2
*290 319	V. MENTAL DISORDERS	610	246	364	582	233	349	28	13	15
290-294	ORGANIC PSYCHOTIC CONDITIONS	221	69	152	215	66	149	6	3	3
290	SENILE AND PRESENILE ORGANIC PSYCHOTIC CONDITIONS	211	59	152	206	57	149	5	2	3
291	ALCOHOLIC PSYCHOSES	7	7	0	6	6	0	1	1	0
294	OTHER ORGANIC PSYCHOTIC CONDITIONS (CHRONIC)	3	3	0	3	3	0	0	0	0
295-299	OTHER PSYCHOSES	148	56	92	142	55	87	6	1	5
295	SCHIZOPHRENIC PSYCHOSES	6	2	4	6	2	4	0	0	0
298	OTHER NONORGANIC PSYCHOSES	142	54	88	136	53	83	6	1	5
300-316	NEUROSES, PERSONALITY DISORDERS, AND OTHER NONPSYCHOTIC DISORDERS	238	120	118	222	111	111	16	9	7
303	ALCOHOL DEPENDENCE SYNDROME	96	70	26	85	64	21	11	6	5
304	DRUG DEPENDENCE	6	2	4	5	1	4	1	1	0
305	NONDEPENDENT ABUSE OF DRUGS	27	19	8	24	18	6	3	1	2
307	SPECIAL SYMPTOMS OR SYNDROMES NOT ELSEWHERE CLASSIFIED	2	1	1	2	1	1	0	0	0
308	ACUTE REACTION TO STRESS	2	2	0	2	2	0	0	0	0
309	ADJUSTMENT REACTION	1	1	0	1	1	0	0	0	0
310	SPECIFIC NONPSYCHOTIC MENTAL DISORDERS FOLLOWING ORGANIC BRAIN DAMAGE	93	21	72	92	20	72	1	1	0
311	DEPRESSIVE DISORDER, NOT ELSEWHERE CLASSIFIED	11	4	7	11	4	7	0	0	0
317-319	MENTAL RETARDATION	3	1	2	3	1	2	0	0	0
319	UNSPECIFIED MENTAL RETARDATION	3	1	2	3	1	2	0	0	0
*320 389	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	1174	513	661	1146	496	650	28	17	11
320-326	INFLAMMATORY DISEASES OF THE CENTRAL NERVOUS SYSTEM	33	16	17	31	14	17	2	2	0
320	BACTERIAL MENINGITIS	13	6	7	12	5	7	1	1	0
322	MENINGITIS OF UNSPECIFIED CAUSE	9	3	6	9	3	6	0	0	0
323	ENCEPHALITIS, MYELITIS AND ENCEPHALOMYELITIS	8	5	3	7	4	3	1	1	0
324	INTRACRANIAL AND INTRASPINAL ABSCESS	3	2	1	3	2	1	0	0	0
330-337	HEREDITARY AND DEGENERATIVE DISEASES OF NERVOUS SYSTEM	852	360	492	843	356	487	9	4	5
330	CEREBRAL DEGENERATIONS USUALLY MANIFEST IN CHILDHOOD	5	2	3	4	1	3	1	1	0
331	OTHER CEREBRAL DEGENERATIONS	484	166	318	479	165	314	5	1	4
332	PARKINSON'S DISEASE	208	107	101	206	106	100	2	1	1
333	OTHER EXTRAPYRAMIDAL DISEASE AND ABNORMAL MOVEMENT DISORDERS	24	14	10	24	14	10	0	0	0

TABLE C-15

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	NON-WHITE TOT	NON-WHITE MALE	NON-WHITE FEM
	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS (CONTINUED)									
334	SPINOCEREBELLAR DISEASE	11	3	8	11	3	8	0	0	0
335	ANTERIOR HORN CELL DISEASE	112	65	47	111	64	47	1	1	0
336	OTHER DISEASES OF SPINAL CORD	7	2	5	7	2	5	0	0	0
337	DISORDERS OF THE AUTONOMIC NERVOUS SYSTEM	1	1	0	1	1	0	0	0	0
340-349	OTHER DISORDERS OF THE CENTRAL NERVOUS SYSTEM	227	99	128	213	90	123	14	9	5
340	MULTIPLE SCLEROSIS	53	20	33	50	17	33	3	3	0
341	OTHER DEMYELINATING DISEASES OF CENTRAL NERVOUS SYSTEM	6	2	4	6	2	4	0	0	0
342	HEMIPLEGIA	5	1	4	5	1	4	0	0	0
343	INFANTILE CEREBRAL PALSY	8	5	3	7	4	3	1	1	0
344	OTHER PARALYTIC SYNDROMES	14	9	5	14	9	5	0	0	0
345	EPILEPSY	35	17	18	30	14	16	5	3	2
348	OTHER CONDITIONS OF BRAIN	103	43	60	98	41	57	5	2	3
349	OTHER AND UNSPECIFIED DISORDERS OF THE NERVOUS SYSTEM	3	2	1	3	2	1	0	0	0
350-359	DISORDERS OF PERIPHERAL NERVOUS SYSTEM	61	37	24	58	35	23	3	2	1
354	MONONEURITIS OF UPPER LIMB AND MONONEURITIS MULTIPLEX	2	1	1	2	1	1	0	0	0
355	MONONEURITIS OF LOWER LIMB	1	0	1	1	0	1	0	0	0
356	HEREDITARY AND IDIOPATHIC PERIPHERAL NEUROPATHY	15	8	7	15	8	7	0	0	0
357	INFLAMMATORY AND TOXIC NEUROPATHY	8	3	5	7	3	4	1	0	1
358	MYONEURAL DISORDERS	9	4	5	9	4	5	0	0	0
359	MUSCULAR DYSTROPHIES AND OTHER MYOPATHIES	26	21	5	24	19	5	2	2	0
380-389	DISEASES OF THE EAR AND MASTIOD PROCESS	1	1	0	1	1	0	0	0	0
382	SUPPURATIVE AND UNSPECIFIED OTITIS MEDIA	1	1	0	1	1	0	0	0	0
*390 459	VII. DISEASES OF THE CIRCULATORY SYSTEM	25583	11719	13864	24864	11369	13495	709	346	363
390-392	ACUTE RHEUMATIC FEVER	3	0	3	3	0	3	0	0	0
390	RHEUMATIC FEVER WITHOUT MENTION OF HEART INVOLVEMENT	1	0	1	1	0	1	0	0	0
391	RHEUMATIC FEVER WITH HEART INVOLVEMENT	2	0	2	2	0	2	0	0	0
393-398	CHRONIC RHEUMATIC HEART DISEASE	181	51	130	177	48	129	4	3	1
394	DISEASES OF MITRAL VALVE	73	26	47	70	24	46	3	2	1
395	DISEASES OF AORTIC VALVE	4	1	3	4	1	3	0	0	0
396	DISEASES OF MITRAL AND AORTIC VALVES	24	10	14	24	10	14	0	0	0
397	DISEASES OF OTHER ENDOCARDIAL STRUCTURES	11	4	7	11	4	7	0	0	0
398	OTHER RHEUMATIC HEART DISEASE	69	10	59	68	9	59	1	1	0
401-405	HYPERTENSIVE DISEASE	610	255	355	567	234	333	43	21	22
401	ESSENTIAL HYPERTENSION	105	38	67	105	38	67	0	0	0
402	HYPERTENSIVE HEART DISEASE	380	163	217	348	146	202	32	17	15
403	HYPERTENSIVE RENAL DISEASE	90	42	48	82	39	43	8	3	5
404	HYPERTENSIVE HEART AND RENAL DISEASE	35	12	23	32	11	21	3	1	2
410-414	ISCHEMIC HEART DISEASE	13965	6872	7093	13696	6744	6952	265	127	138
410	ACUTE MYOCARDIAL INFARCTION	6663	3430	3233	6539	3373	3166	123	57	66
411	OTHER ACUTE AND SUBACUTE FORM OF ISCHAEMIC HEART DISEASE	15	6	9	15	6	9	0	0	0
412	OLD MYOCARDIAL INFARCTION	20	8	12	18	8	10	2	0	2
413	ANGINA PECTORIS	33	10	23	32	9	23	1	1	0
414	OTHER FORMS OF CHRONIC ISCHAEMIC HEART DISEASE	7234	3418	3816	7092	3348	3744	139	69	70

TABLE C-15 (CONTINUED)

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	NON-WHITE TOT	NON-WHITE MALE	NON-WHITE FEM
	VII. DISEASES OF THE CIRCULATORY SYSTEM (CONTINUED)									
415-417	DISEASES OF PULMONARY CIRCULATION	301	123	178	289	116	173	11	6	5
415	ACUTE PULMONARY HEART DISEASE	243	101	142	234	94	140	8	6	2
416	CHRONIC PULMONARY HEART DISEASE	57	21	36	54	21	33	3	0	3
417	OTHER DISEASES OF PULMONARY CIRCULATION	1	1	0	1	1	0	0	0	0
420-429	OTHER FORMS OF HEART DISEASE	5359	2449	2910	5137	2330	2807	221	119	102
420	ACUTE PERICARDITIS	1	0	1	1	0	1	0	0	0
421	ACUTE AND SUBACUTE ENDOCARDITIS	27	15	12	26	14	12	1	1	0
422	ACUTE MYOCARDITIS	4	0	4	4	0	4	0	0	0
423	OTHER DISEASES OF PERICARDIUM	14	10	4	13	9	4	1	1	0
424	OTHER DISEASES OF ENDOCARDIUM	380	143	237	372	141	231	8	2	6
425	CARDIOMYOPATHY	418	278	140	387	253	134	31	25	6
426	CONDUCTION DISORDERS	17	6	11	17	6	11	0	0	0
427	CARDIAC DYSRHYTHMIAS	2010	944	1066	1951	922	1029	58	22	36
428	HEART FAILURE	1222	436	786	1193	424	769	29	12	17
429	ILL-DEFINED DESCRIPTIONS AND COMPLICATIONS OF HEART DISEASE	1266	617	649	1173	561	612	93	56	37
430-438	CEREBROVASCULAR DISEASE	3731	1318	2413	3605	1266	2339	126	52	74
430	SUBARACHNOID HAEMORRHAGE	172	59	113	158	54	104	14	5	9
431	INTRACEREBRAL HAEMORRHAGE	452	185	267	429	174	255	23	11	12
432	OTHER AND UNSPECIFIED INTRACRANIAL HAEMORRHAGE	87	36	51	85	35	50	2	1	1
433	OCCLUSION AND STENOSIS OF PRECEREBRAL ARTERIES	35	17	18	34	17	17	1	0	1
434	OCCLUSION OF CEREBRAL ARTERIES	635	218	417	620	212	408	15	6	9
435	TRANSCIENT CEREBRAL ISCHAEMIA	13	3	10	13	3	10	0	0	0
436	ACUTE BUT ILL-DEFINED CEREBROVASCULAR DISEASE	1818	639	1179	1766	618	1148	52	21	31
437	OTHER AND ILL-DEFINED CEREBROVASCULAR DISEASE	259	68	191	250	64	186	9	4	5
438	LATE EFFECTS OF CEREBROVASCULAR DISEASE	260	93	167	250	89	161	10	4	6
440-448	DISEASES OF ARTERIES, ARTERIOLES, AND CAPILLARIES	1289	582	707	1256	564	692	30	16	14
440	ATHEROSCLEROSIS	630	222	408	615	215	400	14	6	8
441	AORTIC ANEURYSM	420	255	165	409	248	161	10	7	3
442	OTHER ANEURYSM	18	10	8	18	10	8	0	0	0
443	OTHER PERIPHERAL VASCULAR DISEASE	133	60	73	130	58	72	3	2	1
444	ARTERIAL EMBOLISM AND THROMBOSIS	42	19	23	42	19	23	0	0	0
446	POLYARTERITIS NODOSA AND ALLIED CONDITIONS	19	5	14	16	4	12	2	0	2
447	OTHER DISORDERS OF ARTERIES AND ARTERIOLES	27	11	16	26	10	16	1	1	0
451-459	DISEASES OF VEINS AND LYMPHATICS, AND OTHER DIS. OF CIRCULATORY SYS.	144	69	75	134	67	67	9	2	7
451	PHLEBITIS AND THROMBOPHLEBITIS	26	12	14	24	11	13	2	1	1
452	PORTAL VEIN THROMBOSIS	1	1	0	1	1	0	0	0	0
453	OTHER VENOUS EMBOLISM AND THROMBOSIS	12	4	8	12	4	8	0	0	0
454	VARICOSE VEINS OF LOWER EXTREMITIES	6	5	1	5	4	1	1	1	0
455	HAEMORRHOIDS	1	1	0	1	1	0	0	0	0
456	VARICOSE VEINS OF OTHER SITES	12	6	6	11	6	5	1	0	1
457	NONINFECTIVE DISORDERS OF LYMPHATIC CHANNELS	1	1	0	1	1	0	0	0	0
458	HYPOTENSION	64	28	36	60	28	32	3	0	3
459	OTHER DISORDERS OF CIRCULATORY SYSTEM	21	11	10	19	11	8	2	0	2

TABLE C-15

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*460 519	VIII. DISEASES OF THE RESPIRATORY SYSTEM	5321	2583	2738	5173	2497	2676	147	86	61
460-466	ACUTE RESPIRATORY INFECTIONS	30	8	22	29	7	22	1	1	0
464	ACUTE LARYNGITIS AND TRACHEITIS	3	1	2	2	0	2	1	1	0
465	ACUTE UPPER RESPIRATORY INFECTIONS OF MULTIPLE OR UNSPECIFIED SITES	6	1	5	6	1	5	0	0	0
466	ACUTE BRONCHITIS AND BRONCHIOLITIS	21	6	15	21	6	15	0	0	0
470-478	OTHER DISEASES UPPER RESPIRATORY TRACT	11	7	4	10	7	3	1	0	1
473	CHRONIC SINUSITIS	4	2	2	4	2	2	0	0	0
478	OTHER DISEASES OF UPPER RESPIRATORY TRACT	7	5	2	6	5	1	1	0	1
480-487	PNEUMONIA AND INFLUENZA	2532	1124	1408	2454	1078	1376	77	46	31
480	VIRAL PNEUMONIA	15	5	10	15	5	10	0	0	0
481	PNEUMOCOCCAL PNEUMONIA	82	36	46	79	34	45	3	2	1
482	OTHER BACTERIAL PNEUMONIA	100	55	45	95	51	44	5	4	1
483	PNEUMONIA DUE TO OTHER SPECIFIED ORGANISM	4	3	1	4	3	1	0	0	0
485	BRONCHOPNEUMONIA, ORGANISM UNSPECIFIED	196	68	128	188	64	124	7	4	3
486	PNEUMONIA, ORGANISM UNSPECIFIED	2109	952	1157	2047	916	1131	62	36	26
487	INFLUENZA	26	5	21	26	5	21	0	0	0
490-496	CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ALLIED CONDITIONS	2021	1089	932	1981	1062	919	40	27	13
490	BRONCHITIS, NOT SPECIFIED AS ACUTE OR CHRONIC	22	8	14	22	8	14	0	0	0
491	CHRONIC BRONCHITIS	76	43	33	76	43	33	0	0	0
492	EMPHYSEMA	350	194	156	340	184	156	10	10	0
493	ASTHMA	101	37	64	94	34	60	7	3	4
494	BRONCHIECTASIS	22	7	15	22	7	15	0	0	0
495	EXTRINSIC ALLERGIC ALVEOLITIS	1	0	1	1	0	1	0	0	0
496	CHRONIC AIRWAYS OBSTRUCTION, NOT ELSEWHERE CLASSIFIED	1449	800	649	1426	786	640	23	14	9
500-508	PNEUMOCONIOSES AND OTHER LUNG DISEASES DUE TO EXTERNAL AGENTS	307	140	167	297	136	161	10	4	6
500	COALWORKERS' PNEUMOCONIOSIS	2	1	1	2	1	1	0	0	0
501	ASBESTOSIS	9	9	0	9	9	0	0	0	0
502	PNEUMOCONIOSIS DUE TO OTHER SILICA OR SILICATES	2	2	0	1	1	0	1	1	0
503	PNEUMOCONIOSIS DUE TO OTHER INORGANIC DUST	2	0	2	2	0	2	0	0	0
507	PNEUMONITIS DUE TO SOLIDS AND LIQUIDS	292	128	164	283	125	158	9	3	6
510-519	OTHER DISEASES OF RESPIRATORY SYSTEM	420	215	205	402	207	195	18	8	10
510	EMPYEMA	20	13	7	19	13	6	1	0	1
511	PLEURISY	19	7	12	18	7	11	1	0	1
512	PNEUMOTHORAX	8	4	4	8	4	4	0	0	0
513	ABSCESS OF LUNG AND MEDIASTINUM	11	5	6	9	5	4	2	0	2
514	PULMONARY CONGESTION AND HYPOSTASIS	24	17	7	23	17	6	1	0	1
515	POSTINFLAMMATORY PULMONARY FIBROSIS	100	43	57	97	42	55	3	1	2
516	OTHER ALVEOLAR AND PARIETOALVEOLAR PNEUMOPATHY	28	15	13	25	14	11	3	1	2
518	OTHER DISEASES OF LUNG	175	96	79	169	91	78	6	5	1
519	OTHER DISEASES OF RESPIRATORY SYSTEM	35	15	20	34	14	20	1	1	0

TABLE C-15 (CONTINUED)

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*520 579	IX. DISEASES OF THE DIGESTIVE SYSTEM	2253	1143	1110	2171	1098	1073	81	45	36
520-529	DISEASES OF ORAL CAVITY, SALIVARY GLANDS AND JAWS	3	0	3	3	0	3	0	0	0
527	DISEASES OF THE SALIVARY GLANDS	1	0	1	1	0	1	0	0	0
528	DISEASES OF THE ORAL SOFT TISSUES, EXCLUDING LESIONS SPECIFIC FOR GINGIVA AND TONGUE	1	0	1	1	0	1	0	0	0
529	DISEASES AND OTHER CONDITIONS OF THE TONGUE	1	0	1	1	0	1	0	0	0
530-537	DISEASES OF ESOPHAGUS, STOMACH, AND DUODENUM	206	94	112	197	88	109	9	6	3
530	DISEASES OF OESOPHAGUS	46	22	24	45	21	24	1	1	0
531	GASTRIC ULCER	44	15	29	44	15	29	0	0	0
532	DUODENAL ULCER	52	27	25	50	26	24	2	1	1
533	PEPTIC ULCER, SITE UNSPECIFIED	39	16	23	38	15	23	1	1	0
534	GASTROJEJUNAL ULCER	1	1	0	1	1	0	0	0	0
535	GASTRITIS AND DUODENITIS	15	8	7	12	6	6	3	2	1
537	OTHER DISORDERS OF STOMACH AND DUODENUM	9	5	4	7	4	3	2	1	1
540-543	APPENDICITIS	11	4	7	9	4	5	2	0	2
540	ACUTE APPENDICITIS	10	4	6	9	4	5	1	0	1
541	APPENDICITIS, UNQUALIFIED	1	0	1	0	0	0	1	0	1
550-553	HERNIA OF ABDOMINAL CAVITY	34	14	20	33	14	19	1	0	1
550	INGUINAL HERNIA	4	3	1	4	3	1	0	0	0
551	OTHER HERNIA OF ABDOMINAL CAVITY, WITH GANGRENE	10	5	5	9	5	4	1	0	1
552	OTHER HERNIA OF ABDOMINAL CAVITY WITH OBSTRUCTION, WITHOUT MENTION OF GANGRENE	14	5	9	14	5	9	0	0	0
553	OTHER HERNIA OF ABDOMINAL CAVITY WITHOUT MENTION OF OBSTRUCTION OR GANGRENE	6	1	5	6	1	5	0	0	0
555-558	NONINFECTIVE ENTERITIS AND COLITIS	283	98	185	279	98	181	4	0	4
555	REGIONAL ENTERITIS	16	6	10	16	6	10	0	0	0
556	IDIOPATHIC PROCTOCOLITIS	13	4	9	11	4	7	2	0	2
557	VASCULAR INSUFFICIENCY OF INTESTINE	221	76	145	220	76	144	1	0	1
558	OTHER NONINFECTIVE GASTROENTERITIS AND COLITIS	33	12	21	32	12	20	1	0	1
560-569	OTHER DISEASES OF INTESTINE AND PERITONEUM	343	115	228	331	112	219	11	3	8
560	INTESTINAL OBSTRUCTION WITHOUT MENTION OF HERNIA	134	39	95	130	38	92	4	1	3
562	DIVERTICULA OF INTESTINE	83	20	63	80	20	60	3	0	3
564	FUNCTIONAL DIGESTIVE DISORDERS, NOT ELSEWHERE CLASSIFIED	8	3	5	8	3	5	0	0	0
566	ABCESS OF ANAL AND RECTAL REGIONS	3	0	3	3	0	3	0	0	0
567	PERITONITIS	47	23	24	45	21	24	2	2	0
568	OTHER DISORDERS OF PERITONEUM	7	2	5	7	2	5	0	0	0
569	OTHER DISORDERS OF INTESTINE	61	28	33	58	28	30	2	0	2
570-579	OTHER DISEASES OF DIGESTIVE SYSTEM	1373	818	555	1319	782	537	54	36	18
570	ACUTE AND SUBACUTE NECROSIS OF LIVER	10	5	5	9	5	4	1	0	1
571	CHRONIC LIVER DISEASE AND CIRRHOSIS	724	490	234	699	473	226	25	17	8
572	LIVER ABSCESS AND SEQUELAE OF CHRONIC LIVER DISEASE	144	81	63	135	74	61	9	7	2
573	OTHER DISORDERS OF LIVER	52	27	25	50	26	24	2	1	1
574	CHOLELITHIASIS	33	17	16	33	17	16	0	0	0
575	OTHER DISORDERS OF GALLBLADDER	59	25	34	59	25	34	0	0	0
576	OTHER DISORDERS OF BILIARY TRACT	38	18	20	36	17	19	2	1	1
577	DISEASES OF PANCREAS	66	40	26	63	38	25	3	2	1
578	GASTROINTESTINAL HAEMORRHAGE	244	114	130	232	106	126	12	8	4

TABLE C-15

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	NON-WHITE TOT	NON-WHITE MALE	NON-WHITE FEM
	IX. DISEASES OF THE DIGESTIVE SYSTEM (CONTINUED)									
579	INTESTINAL MALABSORPTION	3	1	2	3	1	2	0	0	0
*580 629	X. DISEASES OF THE GENITOURINARY SYSTEM	1121	473	648	1070	444	626	51	29	22
580-589	NEPHRITIS AND NEPHROSIS	674	301	373	641	284	357	33	17	16
580	ACUTE GLOMERULONEPHRITIS	2	0	2	2	0	2	0	0	0
581	NEPHROTIC SYNDROME	4	2	2	4	2	2	0	0	0
582	CHRONIC GLOMERULONEPHRITIS	26	11	15	24	10	14	2	1	1
583	NEPHRITIS AND NEPHROPATHY, NOT SPECIFIED AS ACUTE OR CHRONIC	7	5	2	7	5	2	0	0	0
584	ACUTE RENAL FAILURE	116	57	59	110	53	57	6	4	2
585	CHRONIC RENAL FAILURE	154	68	86	141	63	78	13	5	8
586	RENAL FAILURE, UNSPECIFIED	364	158	206	352	151	201	12	7	5
587	RENAL SCLEROSIS, UNSPECIFIED	1	0	1	1	0	1	0	0	0
590-599	OTHER DISEASES OF URINARY SYSTEM	426	155	271	408	143	265	18	12	6
590	INFECTIONS OF KIDNEY	18	6	12	18	6	12	0	0	0
591	HYDRONEPHROSIS	3	2	1	3	2	1	0	0	0
592	CALCULUS OF KIDNEY AND URETER	15	6	9	15	6	9	0	0	0
593	OTHER DISORDERS OF KIDNEY AND URETER	47	26	21	39	21	18	8	5	3
595	CYSTITIS	4	0	4	4	0	4	0	0	0
596	OTHER DISORDERS OF BLADDER	7	3	4	7	3	4	0	0	0
598	URETHRAL STRICTURE	2	2	0	2	2	0	0	0	0
599	OTHER DISORDERS OF URETHRA AND URINARY TRACT	330	110	220	320	103	217	10	7	3
600-608	DISEASES OF MALE GENITAL ORGANS	17	17	0	17	17	0	0	0	0
600	HYPERPLASIA OF PROSTATE	10	10	0	10	10	0	0	0	0
601	INFLAMMATORY DISEASES OF PROSTATE	1	1	0	1	1	0	0	0	0
602	OTHER DISORDERS OF PROSTATE	4	4	0	4	4	0	0	0	0
608	OTHER DISORDERS OF MALE GENITAL ORGANS	2	2	0	2	2	0	0	0	0
610-611	DISORDERS OF BREAST	3	0	3	3	0	3	0	0	0
611	OTHER DISORDERS OF BREAST	3	0	3	3	0	3	0	0	0
614-616	INFLAMMATORY DISEASE OF FEMALE PELVIC ORGANS	1	0	1	1	0	1	0	0	0
614	INFLAMMATORY DISEASE OF OVARY,FALLOPIAN TUBE, PELVIC CELLULAR TISSUE AND PERITONIUM	1	0	1	1	0	1	0	0	0
*630 676	XI. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND PUERPERIUM	3	0	3	2	0	2	1	0	1
640-648	COMPLICATIONS MAINLY RELATED TO PREGNANCY	3	0	3	2	0	2	1	0	1
641	ANTEPARTUM HAEMORRHAGE, ABRUPTIO PLACENTAE, AND PLACENTA PRAEVIA	2	0	2	1	0	1	1	0	1
642	HYPERTENSION COMPLICATING PREGNANCY, CHILDBIRTH AND THE PUERPERIUM	1	0	1	1	0	1	0	0	0

TABLE C-15 (CONTINUED)

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*680 709	XII. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	87	26	61	82	22	60	5	4	1
680-686	INFECTIONS OF SKIN AND SUBCUTANEOUS TISSUE	21	9	12	20	8	12	1	1	0
682	OTHER CELLULITIS AND ABSCESS	16	7	9	15	6	9	1	1	0
686	OTHER LOCAL INFECTIONS OF SKIN AND SUBCUTANEOUS TISSUE	5	2	3	5	2	3	0	0	0
690-698	OTHER INFLAMMATORY CONDITIONS OF SKIN AND SUBCUTANEOUS TISSUE	14	6	8	13	5	8	1	1	0
694	BULLOUS DERMATOSES	7	3	4	7	3	4	0	0	0
695	ERYTHEMATOUS CONDITIONS	6	2	4	5	1	4	1	1	0
696	PSORIASIS AND SIMILAR DISORDERS	1	1	0	1	1	0	0	0	0
700-709	OTHER DISEASES OF SKIN AND SUBCUTANEOUS TISSUE	52	11	41	49	9	40	3	2	1
707	CHRONIC ULCER OF SKIN	52	11	41	49	9	40	3	2	1
*710 739	XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE	136	37	99	126	33	93	10	4	6
710-719	ARTHROPATHIES AND RELATED DISORDERS	90	18	72	82	14	68	8	4	4
710	DIFFUSE DISEASES OF CONNECTIVE TISSUE	36	8	28	33	7	26	3	1	2
711	ARTHROPATHY ASSOCIATED WITH INFECTIONS	1	1	0	1	1	0	0	0	0
714	RHEUMATOID ARTHRITIS AND OTHER INFLAMMATORY POLYARTHROPATHIES	42	6	36	39	5	34	3	1	2
715	OSTEOARTHROSIS AND ALLIED DISORDERS	8	2	6	7	1	6	1	1	0
716	OTHER AND UNSPECIFIED ARTHROPATHIES	2	0	2	2	0	2	0	0	0
718	OTHER DERANGEMENT OF JOINT	1	1	0	0	0	0	1	1	0
720-724	DORSOPATHIES	8	4	4	8	4	4	0	0	0
720	ANKYLOSING SPONDYLITIS AND OTHER INFLAMMATORY SPONDYLOPATHIES	3	3	0	3	3	0	0	0	0
721	SPONDYLOSIS AND ALLIED DISORDERS	3	1	2	3	1	2	0	0	0
724	OTHER AND UNSPECIFIED DISORDERS OF BACK	2	0	2	2	0	2	0	0	0
725-729	RHEUMATISM, EXCLUDING THE BACK	10	5	5	10	5	5	0	0	0
725	POLYMYALGIA RHEUMATICA	2	0	2	2	0	2	0	0	0
728	DISORDERS OF MUSCLE, LIGAMENT AND FASCIA	6	5	1	6	5	1	0	0	0
729	OTHER DISORDERS OF SOFT TISSUES	2	0	2	2	0	2	0	0	0
730-739	OSTEOPATHIES CHRONDROPATHIES & ACQUIRED MUSCULOSKELATAL DEFORMITIES	28	10	18	26	10	16	2	0	2
730	OSTEOMYELITIS, PERIOSTITIS AND OTHER INFECTIONS INVOLVING BONE	10	5	5	10	5	5	0	0	0
731	OSTEITIS DEFORMANS AND OSTEOPATHIES ASSOCIATED WITH OTHER DISORDERS CLASSIFIED ELSEWHERE	1	1	0	1	1	0	0	0	0
733	OTHER DISORDERS OF BONE AND CARTILAGE	7	1	6	6	1	5	1	0	1
737	CURVATURE OF SPINE	9	3	6	8	3	5	1	0	1
738	OTHER ACQUIRED DEFORMITY	1	0	1	1	0	1	0	0	0

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1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*740 759	XIV. CONGENITAL ANOMALIES	226	126	100	201	112	89	25	14	11
740	ANENCEPHALUS AND SIMILAR ANOMALIES	3	2	1	3	2	1	0	0	0
741	SPINA BIFIDA	1	1	0	1	1	0	0	0	0
742	OTHER CONGENITAL ANOMALIES OF NERVOUS SYSTEM	22	16	6	21	15	6	1	1	0
744	CONGENITAL ANOMALIES OF EAR, FACE AND NECK	1	1	0	0	0	0	1	1	0
745	BULBUS CORDIS ANOMALIES AND ANOMALIES OF CARDIAC SEPTAL CLOSURE	29	11	18	24	9	15	5	2	3
746	OTHER CONGENITAL ANOMALIES OF HEART	69	39	30	64	35	29	5	4	1
747	OTHER CONGENITAL ANOMALIES OF CIRCULATORY SYSTEM	18	11	7	16	9	7	2	2	0
748	CONGENITAL ANOMALIES OF RESPIRATORY SYSTEM	24	16	8	20	14	6	4	2	2
750	OTHER CONGENITAL ANOMALIES OF UPPER ALIMENTARY TRACT	1	1	0	1	1	0	0	0	0
751	OTHER CONGENITAL ANOMALIES OF DIGESTIVE SYSTEM	5	1	4	4	1	3	1	0	1
753	CONGENITAL ANOMALIES OF URINARY SYSTEM	18	9	9	16	8	8	2	1	1
756	OTHER CONGENITAL MUSCULOSKELETAL ANOMALIES	14	9	5	14	9	5	0	0	0
758	CHROMOSOMAL ANOMALIES	11	4	7	10	4	6	1	0	1
759	OTHER AND UNSPECIFIED CONGENITAL ANOMALIES	10	5	5	7	4	3	3	1	2
*760 779	XV. CERTAIN CONDITIONS ORIGINATING IN PERINATAL PERIOD	375	223	152	292	178	114	83	45	38
760	FETUS OR NEWBORN AFFECTED BY MATERNAL CONDITIONS WHICH MAY BE UNRELATED TO PRESENT PREGNANCY	2	1	1	2	1	1	0	0	0
761	FETUS OR NEWBORN AFFECTED BY MATERNAL COMPLICATIONS OF PREGNANCY	34	18	16	21	13	8	13	5	8
762	FETUS OR NEWBORN AFFECTED BY COMPLICATIONS OF PLACENTA CORD AND MEMBRANES	24	14	10	17	10	7	7	4	3
765	DISORDERS RELATING TO SHORT GESTATION AND UNSPECIFIED LOW BIRTHWEIGHT	61	37	24	45	29	16	16	8	8
767	BIRTH TRAUMA	1	1	0	1	1	0	0	0	0
768	INTRAUTERINE HYPOXIA AND BIRTH ASPHYXIA	27	17	10	19	12	7	8	5	3
769	RESPIRATORY DISTRESS SYNDROME	54	34	20	49	30	19	5	4	1
770	OTHER RESPIRATORY CONDITIONS OF FETUS AND NEWBORN	89	54	35	75	47	28	14	7	7
771	INFECTIONS SPECIFIC TO THE PERINATAL PERIOD	13	6	7	11	6	5	2	0	2
772	FETAL AND NEONATAL HAEMORRHAGE	1	1	0	1	1	0	0	0	0
776	HAEMATOLOGICAL DISORDERS OF FETUS AND NEWBORN	1	1	0	1	1	0	0	0	0
777	PERINATAL DISORDERS OF DIGESTIVE SYSTEM	11	4	7	8	3	5	3	1	2
778	CONDITIONS INVOLVING THE INTEGUMENT AND TEMPERATURE REGULATION OF FETUS AND NEWBORN	2	1	1	1	1	0	1	0	1
779	OTHER AND ILL-DEFINED CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	55	34	21	41	23	18	14	11	3

TABLE C-15 (CONTINUED)

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*780 799	XVI. SYMPTOMS SIGNS, AND ILL-DEFINED CONDITIONS	593	340	253	516	290	226	77	50	27
780-789	SYMPTOMS	74	29	45	71	27	44	3	2	1
780	GENERAL SYMPTOMS	24	15	9	22	13	9	2	2	0
781	SYMPTOMS INVOLVING NERVOUS AND MUSCULOSKELETAL SYSTEMS	3	2	1	3	2	1	0	0	0
782	SYMPTOMS INVOLVING SKIN AND OTHER INTEGUMENTARY TISSUE	1	0	1	1	0	1	0	0	0
783	SYMPTOMS CONCERNING NUTRITION,METABOLISM AND DEVELOPMENT	2	0	2	2	0	2	0	0	0
785	SYMPTOMS INVOLVING CARDIOVASCULAR SYSTEM	35	9	26	34	9	25	1	0	1
786	SYMPTOMS INVOLVING RESPIRATORY SYSTEM AND OTHER CHEST SYMPTOM	7	3	4	7	3	4	0	0	0
789	OTHER SYMPTOMS INVOLVING ABDOMEN AND PELVIS	2	0	2	2	0	2	0	0	0
790-796	NONSPECIFIC ABNORMAL FINDINGS	1	1	0	1	1	0	0	0	0
790	NONSPECIFIC FINDINGS ON EXAMINATION OF BLOOD	1	1	0	1	1	0	0	0	0
797-799	ILL-DEFINED AND UNKNOWN CAUSES OF MORBIDITY AND MORTALITY	518	310	208	444	262	182	74	48	26
797	SENILITY WITHOUT MENTION OF PSYCHOSIS	5	0	5	5	0	5	0	0	0
798	SUDDEN DEATH, CAUSE UNKNOWN	82	55	27	57	41	16	25	14	11
799	OTHER ILL-DEFINED AND UNKNOWN CAUSES OF MORBIDITY AND MORTALITY	431	255	176	382	221	161	49	34	15
*800 999	XVII. EXTERNAL CAUSES OF INJURY AND POISONING	2673	1806	867	2434	1619	815	237	186	51
800-807	RAILWAY ACCIDENTS	8	6	2	8	6	2	0	0	0
802	INVOLVING DERAILMENT WITHOUT ANTECEDENT COLLISION	1	0	1	1	0	1	0	0	0
805	HIT BY ROLLING STOCK	7	6	1	7	6	1	0	0	0
810-819	MOTOR VEHICLE TRAFFIC ACCIDENTS	767	552	215	720	513	207	47	39	8
810	INVOLVING COLLISION WITH TRAIN	2	2	0	2	2	0	0	0	0
812	OTHER ACCIDENT INVOLVING COLLISION WITH ANOTHER MOTOR VEHICLE	250	165	85	237	153	84	13	12	1
813	INVOLVING COLLISION WITH OTHER VEHICLE	9	9	0	9	9	0	0	0	0
814	INVOLVING COLLISION WITH PEDESTRIAN	156	106	50	147	100	47	9	6	3
815	OTHER ACCIDENT INVOLVING COLLISION ON THE HIGHWAY	219	175	44	206	164	42	13	11	2
816	DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY	83	58	25	76	51	25	7	7	0
818	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT	8	8	0	7	7	0	1	1	0
819	OF UNSPECIFIED NATURE	40	29	11	36	27	9	4	2	2
820-825	MOTOR VEHICLE NONTRAFFIC ACCIDENTS	8	8	0	8	8	0	0	0	0
820	INVOLVING MOTOR-DRIVEN SNOW VEHICLE	3	3	0	3	3	0	0	0	0
821	INVOLVING OTHER OFF-ROAD MOTOR VEHICLE	5	5	0	5	5	0	0	0	0
826-829	OTHER ROAD VEHICLE ACCIDENTS	3	2	1	3	2	1	0	0	0
826	PEDAL CYCLE ACCIDENT	1	1	0	1	1	0	0	0	0
828	ACCIDENT INVOLVING ANIMAL BEING RIDDEN	2	1	1	2	1	1	0	0	0
830-838	WATER TRANSPORT ACCIDENTS	20	16	4	18	14	4	2	2	0
830	ACCIDENT TO WATERCRAFT CAUSING SUBMERSION	11	8	3	10	7	3	1	1	0
831	ACCIDENT TO WATERCRAFT CAUSING OTHER INJURY	1	1	0	1	1	0	0	0	0
832	OTHER ACCIDENTAL SUBMERSION OR DROWNING IN WATER TRANSPORT ACCIDENT	5	5	0	4	4	0	1	1	0
833	FALL ON STAIRS OR LADDERS IN WATER TRANSPORT	1	0	1	1	0	1	0	0	0
838	OTHER AND UNSPECIFIED WATER TRANSPORT ACCIDENT	2	2	0	2	2	0	0	0	0
840-845	AIR AND SPACE TRANSPORT ACCIDENTS	13	11	2	13	11	2	0	0	0
840	ACCIDENT TO POWERED AIRCRAFT AT TAKEOFF OR LANDING	3	3	0	3	3	0	0	0	0

TABLE C-15

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS TOT	TOTALS MALE	TOTALS FEM	WHITE TOT	WHITE MALE	WHITE FEM	NON-WHITE TOT	NON-WHITE MALE	NON-WHITE FEM
	XVII. EXTERNAL CAUSES OF INJURY AND POISONING (CONTINUED)									
841	ACCIDENT TO POWERED AIRCRAFT,OTHER AND UNSPECIFIED	8	6	2	8	6	2	0	0	0
842	ACCIDENT TO UNPOWERED AIRCRAFT	2	2	0	2	2	0	0	0	0
850-858	ACCIDENTAL POISONING BY DRUGS AND MEDICAMENTS	69	46	23	66	43	23	3	3	0
850	BY ANALGESICS,ANTIPYRETIC,ANTIRHEUMATICS	19	13	6	19	13	6	0	0	0
853	BY TRANQUILLIZERS	1	0	1	1	0	1	0	0	0
854	BY OTHER PSYCHOTROPIC AGENTS	1	0	1	1	0	1	0	0	0
855	BY OTHER DRUGS ACTING ON CENTRAL AND AUTONOMIC NERVOUS SYSTEMS	12	12	0	12	12	0	0	0	0
856	BY ANTIBIOTICS	2	1	1	1	0	1	1	1	0
858	BY OTHER DRUGS	34	20	14	32	18	14	2	2	0
860-869	ACCIDENTAL POISONING BY OTHER SUBSTANCES GASES AND VAPOURS	23	12	11	20	11	9	3	1	2
860	BY ALCOHOL, NOT ELSEWHERE CLASSIFIED	2	2	0	2	2	0	0	0	0
864	BY CORROSIVES AND CAUSTICS NOT ELSEWHERE CLASSIFIED	1	1	0	0	0	0	1	1	0
866	BY OTHER AND UNSPECIFIED SOLID AND LIQUID SUBSTANCES	1	0	1	0	0	0	1	0	1
867	BY GAS DISTRIBUTED BY PIPELINE	1	0	1	1	0	1	0	0	0
868	BY OTHER UTILITY GAS AND OTHER CARBON MONOXIDE	15	9	6	14	9	5	1	0	1
869	BY OTHER GASES AND VAPOURS	3	0	3	3	0	3	0	0	0
870-876	MISADVENTURE TO PATIENTS DURING SURGICAL AND MEDICAL CARE	1	1	0	1	1	0	0	0	0
870	ACCIDENTAL CUT, PUNCTURE, PERFORATION OR HAEMORRHAGE DURING MEDICAL CARE	1	1	0	1	1	0	0	0	0
878-879	SURGICAL & MEDICAL PROCEDURES AS CAUSE OF LATER COMPLICATION	52	21	31	52	21	31	0	0	0
878	SURGICAL OPERATION/OTHER PROCEDURES AS CAUSE OF ABNORMAL REACTION/LATER COMPLICATION W/O MENTION AT TIME OF OPERATION	42	17	25	42	17	25	0	0	0
879	OTHER PROCEDURES W/O MENTION AT TIME,AS CAUSE OF ABNORMAL REACTION OR LATER COMPLICATION	10	4	6	10	4	6	0	0	0
880-888	ACCIDENTAL FALLS	321	149	172	309	140	169	12	9	3
880	FALL ON OR FROM STAIRS OR STEPS	52	29	23	48	26	22	4	3	1
881	FALL ON OR FROM LADDERS OR SCAFFOLDING	5	5	0	5	5	0	0	0	0
882	FALL FROM OR OUT OF BUILDING OR OTHER STRUCTURE	15	13	2	13	11	2	2	2	0
883	FALL INTO HOLE OR OTHER OPENING IN SURFACE	4	4	0	4	4	0	0	0	0
884	OTHER FALL FROM ONE LEVEL TO ANOTHER	24	11	13	23	10	13	1	1	0
885	FALL ON SAME LEVEL FROM SLIPPING,TRIPPING OR STUMBLING	11	5	6	11	5	6	0	0	0
887	FRACTURE, CAUSE UNSPECIFIED	109	40	69	107	38	69	2	2	0
888	OTHER AND UNSPECIFIED FALL	101	42	59	98	41	57	3	1	2
890-899	ACCIDENTS CAUSED BY FIRES AND FLAMES	86	45	41	76	40	36	10	5	5
890	CONFLAGRATION IN PRIVATE DWELLING	73	39	34	64	35	29	9	4	5
893	ACCIDENT CAUSED BY IGNITION OF CLOTHING	5	3	2	4	2	2	1	1	0
894	IGNITION OF HIGHLY INFLAMMABLE MATERIAL	2	1	1	2	1	1	0	0	0
895	ACCIDENT CAUSED BY CONTROLLED FIRE IN PRIVATE DWELLING	1	0	1	1	0	1	0	0	0
899	ACCIDENT CAUSED BY UNSPECIFIED FIRE	5	2	3	5	2	3	0	0	0
900-909	ACCIDENTS CAUSED BY NATURAL AND	39	26	13	36	24	12	3	2	1

TABLE C-15 (CONTINUED)

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	XVII. EXTERNAL CAUSES OF INJURY AND POISONING (CONTINUED)									
	ENVIRONMENTAL FACTORS									
900	EXCESSIVE HEAT	13	6	7	13	6	7	0	0	0
901	EXCESSIVE COLD	20	15	5	17	13	4	3	2	1
904	HUNGER, THIRST, EXPOSURE, NEGLECT	4	3	1	4	3	1	0	0	0
907	LIGHTNING	2	2	0	2	2	0	0	0	0
910-915	ACCIDENTS CAUSED BY SUBMERSION SUFFOCATION & FOREIGN BODIES	220	131	89	203	119	84	17	12	5
910	ACCIDENTAL DROWNING AND SUBMERSION	69	52	17	56	42	14	13	10	3
911	INHALATION AND INGESTION OF FOOD CAUSING OBSTRUCTION OF RESPIRATORY TRACT OR SUFFOCATION	36	18	18	36	18	18	0	0	0
912	INHALATION AND INGESTION OF OTHER OBJECT CAUSING OBSTRUCTION OF RESPIRATORY TRACT OR SUFFOCATION	88	42	46	86	42	44	2	0	2
913	ACCIDENTAL MECHANICAL SUFFOCATION	25	18	7	23	16	7	2	2	0
915	FOREIGN BODY ACCIDENTALLY ENTERING OTHER ORIFICE	2	1	1	2	1	1	0	0	0
916-928	OTHER ACCIDENTS	91	67	24	83	59	24	8	8	0
916	STRUCK ACCIDENTALLY BY FALLING OBJECT	8	8	0	6	6	0	2	2	0
917	STRIKING AGAINST OR STRUCK ACCIDENTALLY BY OBJECTS OR OR PERSON	7	5	2	7	5	2	0	0	0
918	CAUGHT ACCIDENTALLY IN OR BETWEEN OBJECTS	3	3	0	2	2	0	1	1	0
919	ACCIDENTS CAUSED BY MACHINERY	3	3	0	3	3	0	0	0	0
920	ACCIDENTS CAUSED BY CUTTING AND PIERCING INSTRUMENTS OR OBJECT	1	1	0	1	1	0	0	0	0
921	ACCIDENT CAUSED BY EXPLOSION OF PRESSURE VESSEL	1	1	0	1	1	0	0	0	0
922	ACCIDENT CAUSED BY FIREARM MISSILE	9	9	0	8	8	0	1	1	0
923	ACCIDENT CAUSED BY EXPLOSIVE MATERIAL	2	2	0	2	2	0	0	0	0
925	ACCIDENT CAUSED BY ELECTRIC CURRENT	9	8	1	9	8	1	0	0	0
928	OTHER AND UNSPECIFIED ENVIRONMENTAL AND ACCIDENTAL CAUSES	48	27	21	44	23	21	4	4	0
929-929	LATE EFFECTS OF ACCIDENTAL INJURY	16	10	6	15	9	6	1	1	0
929	LATE EFFECTS OF ACCIDENTAL INJURY	16	10	6	15	9	6	1	1	0
930-949	DRUGS MEDICAMENTS AND BIOLOGICAL SUBSTANCES IN THERAPY	5	5	0	5	5	0	0	0	0
947	OTHER AND UNSPECIFIED DRUGS AND MEDICAMENTS	5	5	0	5	5	0	0	0	0
950-959	SUICIDE AND SELF-INFLICTED INJURY	500	373	127	479	359	120	21	14	7
950	BY SOLID OR LIQUID SUBSTANCES	63	19	44	60	19	41	3	0	3
951	BY GASES IN DOMESTIC USE	1	1	0	1	1	0	0	0	0
952	BY OTHER GASES AND VAPOURS	75	56	19	74	55	19	1	1	0
953	BY HANGING, STRANGULATION AND SUFFOCATION	145	118	27	139	113	26	6	5	1
954	BY SUBMERSION (DROWNING)	22	14	8	20	13	7	2	1	1
955	BY FIREARMS AND EXPLOSIVES	145	127	18	138	121	17	7	6	1
956	BY CUTTING AND PIERCING INSTRUMENTS	20	16	4	20	16	4	0	0	0
957	BY JUMPING FROM HIGH PLACE	23	17	6	21	16	5	2	1	1
958	BY OTHER AND UNSPECIFIED MEANS	6	5	1	6	5	1	0	0	0
960-969	HOMICIDE AND INJURY PURPOSELY INFLICTED BY OTHER PERSONS	237	172	65	147	98	49	89	74	15
963	ASSAULT BY HANGING AND STRANGULATION	15	8	7	15	8	7	0	0	0
965	ASSAULT BY FIREARMS AND EXPLOSIVES	91	78	13	42	35	7	48	43	5
966	ASSAULT BY CUTTING AND PIERCING INSTRUMENT	69	50	19	43	28	15	26	22	4

TABLE C-15

1988

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	XVII. EXTERNAL CAUSES OF INJURY AND POISONING (CONTINUED)									
967	CHILD BATTERING AND OTHER MALTREATMENT	1	0	1	1	0	1	0	0	0
968	ASSAULT BY OTHER AND UNSPECIFIED MEANS	59	34	25	45	26	19	14	8	6
969	LATE EFFECTS OF INJURY PURPOSELY INFLICTED BY OTHER PERSON	2	2	0	1	1	0	1	1	0
970-978	LEGAL INTERVENTION	6	6	0	2	2	0	4	4	0
970	BY FIREARMS	6	6	0	2	2	0	4	4	0
980-989	INJURY UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	188	147	41	170	134	36	17	12	5
980	POISONING BY SOLID OR LIQUID SUBSTANCES,UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	146	115	31	132	105	27	14	10	4
982	POISONING BY OTHER GASES, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	9	8	1	9	8	1	0	0	0
983	HANGING, STRANGULATION OR SUFFOCATION, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	1	1	0	0	0	0	1	1	0
984	SUBMERSION (DROWNING), UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	15	11	4	15	11	4	0	0	0
985	INJURY BY FIREARMS AND EXPLOSIVES, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	2	2	0	2	2	0	0	0	0
986	INJURY BY CUTTING AND PIERCING INSTRUMENTS, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	1	1	0	1	1	0	0	0	0
987	FALLING FROM HIGH PLACE, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	3	2	1	1	1	0	1	0	1
988	INJURY BY OTHER AND UNSPECIFIED MEANS, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	11	7	4	10	6	4	1	1	0
	*** RESIDENT GRAND TOTALS	56407	27287	29120	54224	26084	28140	2163	1196	967

TOTALS INCLUDE 20 OF UNKNOWN RACE: 7 MALES AND 13 FEMALES.

NEONATAL AND INFANT MORTALITY

SECTION D
INFANT AND NEONATAL DEATHS

The total number of resident infant deaths (deaths less than 1 year of age) increased by 14.0% in Massachusetts from 608 in 1987 to 693 in 1988. The rate of infant deaths also increased from 7.2 per 1,000 live births in 1987 to 7.9 in 1988. As with live births and other deaths, all Massachusetts resident infant deaths are included regardless of the state in which they occurred. Neonatal deaths (deaths under 28 days of age) also increased, from 432 in 1987 to 477 in 1988, an increase of 10.4%. The rate of neonatal deaths per 1,000 live births showed an increase from 5.1 in 1987 to 5.4 in 1988.

INFANT DEATHS BY RACE

In 1988, the white infant mortality rate was 7.1 per 1,000 live births, an increase from the 1987 rate of 6.6. The black infant mortality rate was 17.2, reflecting an increase from the 1987 rate of 15.5. The neonatal mortality rate for white infants was 5.0 deaths per 1,000 live births, and the neonatal mortality rate for black infants was 11.3 per 1,000 live births.

INFANT DEATHS BY AGE

Of all infant deaths, 46.8% occurred within the first 24 hours of life and 59.0% within the first week of life.

INFANT DEATHS BY CAUSE

The leading cause of infant deaths was certain conditions originating in the perinatal period (medical conditions arising from approximately 28 weeks gestation to 28 days of age). These deaths accounted for 53.5% of all infant deaths in 1988, a slight decrease from the 1987 percentage of 54.1%. The second leading cause of infant deaths was congenital anomalies, which accounted for 19.8% of infant deaths. The third leading cause of infant deaths was sudden infant death syndrome (SIDS), which increased in number from 57 infant deaths in 1987 (9.4% of all infant deaths) to 79 infant deaths in 1988 (11.4% of all infant deaths).

NEONATAL MORTALITY BY BIRTHWEIGHT

Neonatal mortality is highly correlated to low birthweight. Low birthweight babies (under 2,500 grams or 5 pounds, 8 ounces) accounted for 6.0% of all babies born in Massachusetts in 1988.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

INFANT DEATH

Death of a child whose age is less than one year (365 days).

NEONATAL DEATH

Death of a child whose age is less than 28 days.

FETAL DEATH

A fetal death is a death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as the beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles.

Massachusetts law requires that fetal deaths of 20 or more weeks gestation or of a weight of at least 350 grams be reported; therefore, the fetal deaths referred to in this report are of that gestational age or weight.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

INFANT MORTALITY RATE (IMR)

$$\frac{\text{Number of Resident Deaths at Less than 1 Year of Age}}{\text{Total Resident Live Births}} \times 1{,}000$$

NEONATAL MORTALITY RATE (NMR)

$$\frac{\text{Number of Resident Deaths at Less Than 28 Days of Age}}{\text{Total Resident Live Births}} \times 1{,}000$$

FIGURE D-1

INFANT MORTALITY RATES
MASSACHUSETTS
1980 - 1988

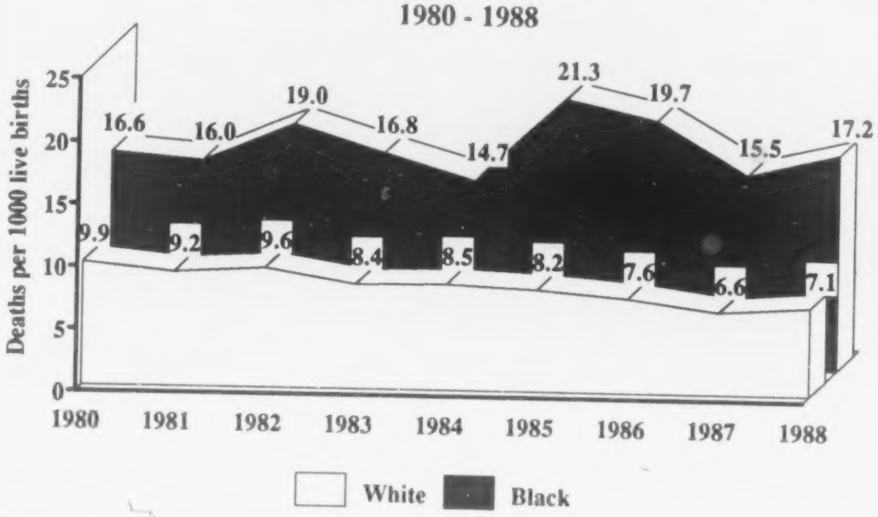

FIGURE D-2

NEONATAL MORTALITY RATES
MASSACHUSETTS
1980 - 1988

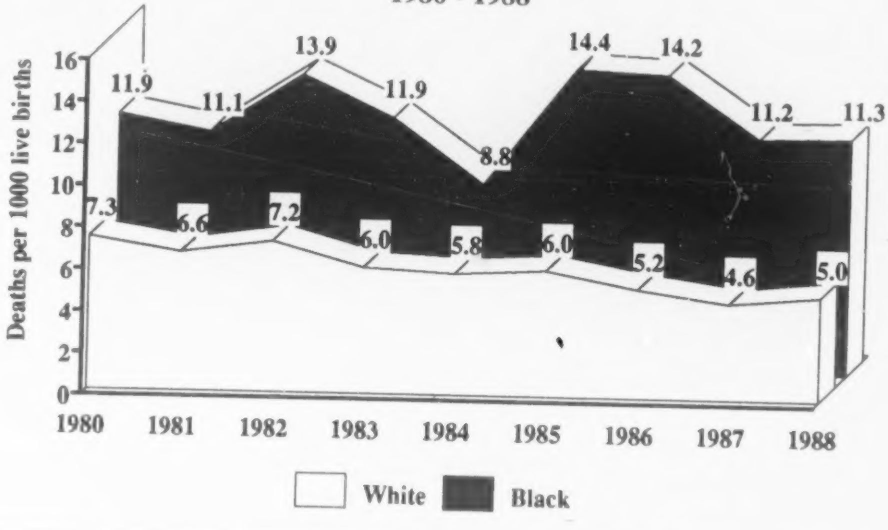

TABLE D-1
RESIDENT INFANT AND NEONATAL DEATHS
MASSACHUSETTS AND UNITED STATES RESIDENT DEATHS
1970-1988

	Deaths Under One Year			Deaths Under 28 Days		
Year	Number of Massachusetts Infant Deaths	Rate Per 1,000 Live Births		Number of Massachusetts Neonatal Deaths	Rate Per 1,000 Live Births	
		Massachusetts	United States		Massachusetts	United States
1970	1,583	16.9	20.0	1,231	13.1	15.1
1971	1,462	16.8	19.1	1,130	13.0	14.2
1972	1,164	15.1	18.5	896	11.6	13.6
1973	1,104	15.2	17.7	861	11.9	13.0
1974	976	13.9	16.7	763	10.8	12.3
1975	903	13.2	16.1	678	9.9	11.6
1976	799	12.1	15.2	585	8.9	10.9
1977	806	11.8	14.1	616	9.1	9.9
1978	753	11.0	13.8	552	8.1	9.5
1979	760	10.8	13.1	564	8.0	8.9
1980	748	10.3	12.6	550	7.6	8.5
1981	710	9.6	11.9	510	6.9	8.0
1982	764	10.1	11.5	573	7.6	7.7
1983	682	9.0	11.2	482	6.3	7.3
1984	699	8.9	10.8	472	6.0	7.0
1985	745	9.1	10.6	538	6.6	7.0
1986	695	8.4	10.4	478	5.8	6.7
1987	608	7.2	10.0+	432	5.1	6.5
1988	693	7.9	9.9*	477	5.4	6.4*

+Revised.

*Provisional.

TABLE D-2
TRENDS IN INFANT AND NEONATAL MORTALITY BY RACE OF INFANT MASSACHUSETTS RESIDENT DEATHS 1980-1988

INFANT

	Deaths Under One Year							
	Total		Race					
			White		Black		Other	
Year	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1980	748	10.3	655	9.9	87	16.6	5	4.0
1981	710	9.6	616	9.2	85	16.0	8	5.3
1982	764	10.1	656	9.6	102	19.0	5	2.9
1983	682	9.0	579	8.4	89	16.8	12	6.6
1984	699	8.9	601	8.5	82	14.7	13	6.6
1985	745	9.1	608	8.2	126	21.3	11	5.3
1986	695	8.4	560	7.6	123	19.7	11	4.0
1987	608	7.2	486	6.6	110	15.5	12	3.9
1988	693	7.9	546	7.1	133	17.2	13	3.4

NEONATAL

	Deaths Under 28 Days							
	Total		Race					
			White		Black		Other	
Year	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1980	550	7.6	483	7.3	62	11.9	5	4.0
1981	510	6.9	442	6.6	59	11.1	5	3.3
1982	573	7.6	494	7.2	75	13.9	3	**
1983	482	6.3	411	6.0	63	11.9	7	3.8
1984	472	6.0	411	5.8	49	8.8	8	4.0
1985	538	6.6	447	6.0	85	14.4	5	2.4
1986	478	5.8	383	5.2	89	14.2	5	1.8
1987	432	5.1	343	4.6	80	11.2	9	2.9
1988	477	5.4	383	5.0	87	11.3	6	1.6

**Calculations based on fewer than 5 events are excluded.

Note: Deaths of infants of unknown race are excluded except for the total calculation. Births of infants of unknown race are allocated into the race categories according to the distribution of births of known races for rate computations.

TABLE D-3
NEONATAL AND INFANT DEATHS
BY SELECTED UNDERLYING CAUSES
MASSACHUSETTS RESIDENT DEATHS
1988

		Neonatal <28 days		Infant <1 year	
Underlying Cause	ICD-9	#	%	#	%
TOTAL		477	100.0	693	100.0
Septicaemia	038	1	**	3	**
Diseases of the Nervous System and Sense Organs	320 - 329	0	**	5	0.7
Diseases of the Circulatory System	390 - 459	5	1.0	16	2.3
Diseases of the Respiratory System	460 - 519	1	**	6	0.9
Diseases of the Digestive System	520 - 579	1	**	7	1.0
Congenital Anomalies	740 - 759	102	21.4	138	19.9
Congenital Anomalies of the Nervous System	740 - 742	9		14	
Congenital Anomalies of the Heart	745 - 746	37		56	
Other Congenital Anomalies of the Circulatory System	747	5		7	
Congenital Anomalies of the Respiratory System	748	19		22	
Congenital Anomalies of the Digestive System	749 - 751	1		2	
Congenital Anomalies of the Musculoskeletal System	753 - 756	23		23	
Chromosomal Anomalies	758	4		6	
Other and Unspecified Congenital Anomalies	759	4		6	
Certain Conditions Originating in the Perinatal Period	760 - 779	350	73.4	371	53.5
Newborn Affected by Maternal Complications of Pregnancy	761	34		34	
Newborn Affected by Complications of Placenta,Cord & Membranes	762	24		24	
Disorders Relating to Short Gestation & Unspecified Low Birthweight	765	59		61	
Intrauterine Hypoxia and Birth Asphyxia	768	24		26	
Respiratory Distress Syndrome	769	51		54	
Other Respiratory Conditions	770	78		87	
Infections Specific to the Perinatal Period	771	12		13	
Other & Ill-defined Conditions Originating in the Perinatal Period	779	51		54	
Sudden Infant Death Syndrome	798.0	4	**	79	11.4
Injuries	E800 - E999	1	**	17	2.4
All Other Causes	Residual	13	2.7	51	7.4

**Calculations based on fewer than five events are excluded.

TABLE D-4
INFANT AND NEONATAL DEATHS BY AGE, SEX, AND RACE
MASSACHUSETTS RESIDENT DEATHS
1988

	Total			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total (less than one year)*	693	408	285	546	326	220	133	75	58	13	7	6
Rate	7.9	9.1	6.6	7.1	8.3	5.9	17.2	19.3	15.2	3.4	3.7	3.1
Less Than One Day*	324	188	136	248	145	103	71	40	31	5	3	2
1 Day	31	18	13	26	16	10	5	2	3	--	--	--
2 Days	23	13	10	20	12	8	3	1	2	--	--	--
3 Days	15	10	5	15	10	5	--	--	--	--	--	--
4 Days	10	3	7	9	2	7	1	1	--	--	--	--
5 Days	4	2	2	3	1	2	1	1	--	--	--	--
6 Days	2	1	1	2	1	1	--	--	--	--	--	--
Less Than One Week*	409	235	174	323	187	136	81	45	36	5	3	2
Rate	4.6	5.2	4.0	4.2	4.8	3.6	10.5	11.6	9.4	1.3	1.6	1.0
7-13 Days	35	20	15	30	18	12	4	1	3	1	1	--
14-27 Days	33	19	14	30	19	11	2	--	2	--	--	--
Less Than 28 Days*	477	274	203	383	224	159	87	46	41	6	4	2
Rate	5.4	6.1	4.7	5.0	5.7	4.2	11.3	11.8	10.7	1.6	2.1	1.0
1 Month	51	30	21	35	20	15	15	10	5	1	--	1
2 Months	44	31	13	33	25	8	10	6	4	1	--	1
3 Months	26	16	10	23	14	9	2	1	1	1	1	--
4 Months	22	13	9	18	11	7	4	2	2	--	--	--
5 Months	21	11	10	15	7	8	5	4	1	1	--	1
6 Months	13	8	5	7	3	4	4	3	1	2	2	--
7 Months	7	5	2	6	4	2	1	1	--	--	--	--
8 Months	14	7	7	11	7	4	2	--	2	1	--	1
9 Months	5	2	3	3	1	2	2	1	1	--	--	--
10 Months	5	5	--	5	5	--	--	--	--	--	--	--
11 Months	8	6	2	7	5	2	1	1	--	--	--	--

-- Indicates zero events.

*Total includes one female of unknown race. In calculating the infant mortality rate by race, births of unknown race have been allocated to white, black, and other based on their percents of total births with reported race.

MARRIAGES AND DIVORCES

SECTION E

MARRIAGES AND DIVORCES

Marriages and divorces are reported by place of occurrence in Massachusetts. For example, if two Boston residents are married in Barnstable, this marriage will be reported by place of occurrence (Barnstable) rather than the residence of the couple (Boston). Marriages have traditionally been reported in this manner because of the number of couples who live in different communities. Additionally, out–of–state residents who marry in Massachusetts are included in these data.

Marriages and divorces which involve Massachusetts residents, but occur in other states, are not included in these figures. No system of interstate exchange exists for these events. Unlike some states, Massachusetts marriage and divorce laws neither encourage out–of–state residents to come to the state nor discourage residents from using the Massachusetts system by imposing long waiting periods, etc. This allows the marriage data to be used to estimate resident marriages.

In 1988, 49,941 marriages occurred in Massachusetts, compared to 49,034 in 1987, an increase of 1.8%. The rate of marriages was 8.5 per 1,000 population in 1988, a slight increase from the 1987 rate of 8.4. The U.S. rate of marriages per 1,000 population decreased from 9.9 per 1,000 population in 1987 to 9.7 in 1988. Of the brides, 75.0% had never previously married. This percentage was slightly less among the grooms—73.4%.

In 1988, 17,676 divorces were granted in Massachusetts, an increase of 4.2% from the 16,994 divorces granted in 1987. The 1988 rate of divorce per 1,000 population in Massachusetts was 3.0. This rate was well below the 1988 U.S. rate of 4.8 divorces per 1,000 population, which did not change from the 1987 U.S. rate of divorces per 1,000 population.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

MARRIAGE RATE

$$\frac{\text{Number of Occurrence Marriages}}{\text{Total Population}} \times 1{,}000$$

DIVORCE RATE

$$\frac{\text{Number of Occurrence Divorces}}{\text{Total Population}} \times 1{,}000$$

TABLE E-1
MARRIAGES AND DIVORCES BY COUNTY
MASSACHUSETTS OCCURRENCE
1988

	Marriages	Divorces
STATE	49,941	17,676
Counties		
Barnstable	2,147	648
Berkshire	1,235	464
Bristol	4,163	1,730
Dukes	290	49
Essex	5,938	2,109
Franklin	545	237
Hampden	3,646	1,527
Hampshire	1,058	326
Middlesex	11,639	3,997
Nantucket	192	34
Norfolk	5,062	1,311
Plymouth	3,437	1,664
Suffolk	4,946	1,134
Worcester	5,643	2,446

FIGURE E-1

RATES OF MARRIAGES AND DIVORCES PER THOUSAND POPULATION 1900-1988

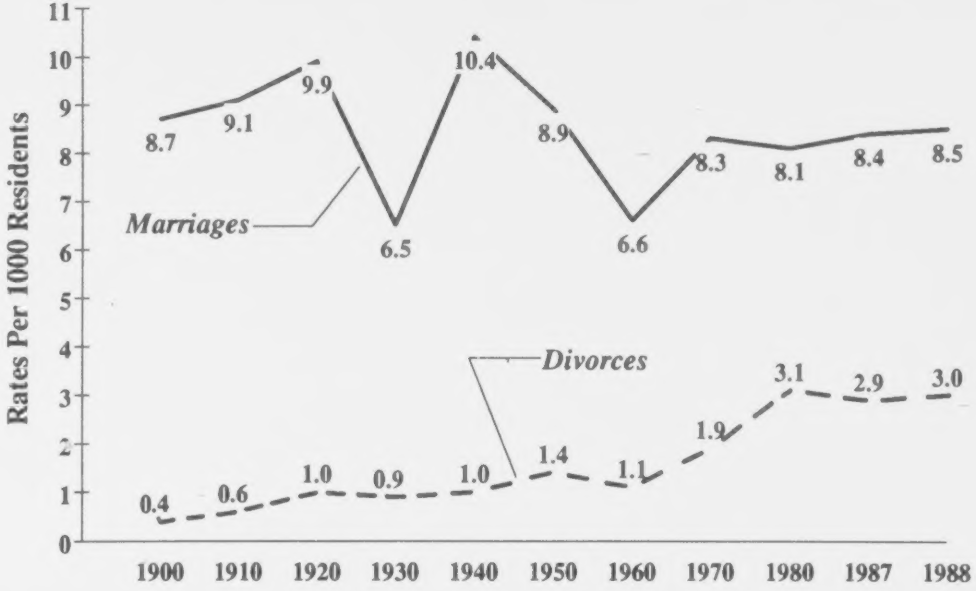

TABLE E-2
MARRIAGES AND DIVORCES AND RATES PER 1,000 POPULATION
MASSACHUSETTS OCCURRENCE
1900-1988

Year	Marriages		Divorces	
	Number	Rate	Number	Rate
1900	24,342	8.7	1,258	0.4
1905	27,184	9.1	1,554	0.5
1910	30,710	9.1	1,929	0.6
1915	31,301	8.5	2,252	0.6
1920	38,048	9.9	3,647	1.0
1925	31,238	7.5	3,395	0.8
1930	27,431	6.5	3,746	0.9
1935	30,019	6.9	4,081	0.9
1940	44,836	10.4	4,502	1.0
1945	38,197	8.5	6,833	1.5
1950	41,711	8.9	6,365	1.4
1955	35,585	7.3	5,601	1.2
1960	34,050	6.6	5,592	1.1
1965	38,281	7.2	7,728	1.5
1970	47,292	8.3	10,818	1.9
1975	42,103	7.3	16,460	2.8
1980	46,273	8.1	17,873	3.1
1981	47,802	8.3	19,502	3.4
1982	48,654	8.4	19,531	3.4
1983	48,789	8.4	18,477	3.2
1984	50,302	8.7	17,123	3.0
1985	49,849	8.6	21,573	3.7
1986	49,990	8.6	19,809	3.4
1987	49,034	8.4	16,994	2.9
1988	49,941	8.5	17,676	3.0

TABLE E-3
MARRIAGES BY AGE AND MARITAL STATUS
MASSACHUSETTS OCCURRENCE
1988

	BRIDE							
	Total		Single		Widowed		Divorced	
Age	Number	%*	Number	%	Number	%	Number	%
TOTAL	49,941	100.0+	37,461	75.0	1,088	2.2	11,392	22.8
<20	2,927	5.9	2,909	5.8	2	**	16	**
20-29	31,068	62.2	28,207	56.5	59	0.1	2,802	5.6
30-39	11,268	22.6	5,708	11.4	187	0.4	5,373	10.8
40-49	3,253	6.5	521	1.0	243	0.5	2,489	5.0
50-59	896	1.8	76	0.2	242	0.5	578	1.2
60-69	393	0.8	35	0.1	245	0.5	113	0.2
≥70	136	0.3	5	**	110	0.2	21	**

	GROOM							
	Total		Single		Widowed		Divorced	
Age	Number	%	Number	%	Number	%	Number	%
TOTAL	49,941	100.0	36,677	73.4	1,128	2.3	12,136	24.3
<20	936	1.9	935	1.9	--	**	1	**
20-29	27,974	56.0	26,266	52.6	17	**	1,691	3.4
30-39	13,992	28.0	8,531	17.1	82	0.2	5,379	10.8
40-49	4,342	8.7	772	1.6	155	0.3	3,415	6.8
50-59	1,601	3.2	114	0.2	252	0.5	1,235	2.5
60-69	791	1.6	49	0.1	387	0.8	355	0.7
≥70	305	0.6	10	**	235	0.5	60	0.1

*All percentages are based on the total number of marriages, e.g., single brides between the ages of 20 and 29 equal 56.5% of all brides married in Massachusetts in 1988.

**Percentage less than 0.1.

--Equal to zero events.

+Percents do not sum to 100.0 due to rounding.

TABLE E-4
NUMBER OF MARRIAGES BY AGE OF BRIDE AND AGE OF GROOM
MASSACHUSETTS OCCURRENCE
1988

AGE OF BRIDE	TOTAL	AGE OF GROOM <20	20-29	30-39	40-49	50-59	60-69	≥70
TOTAL	49,941	936	27,974	13,992	4,342	1,601	791	305
<20	2,927	650	2,186	82	8	1	0	0
20-29	31,068	276	23,296	6,743	674	70	8	1
30-39	11,268	10	2,368	6,401	2,083	343	57	6
40-49	3,253	0	120	733	1,440	755	189	16
50-59	896	0	3	33	134	383	294	49
60-69	393	0	1	0	3	46	215	128
≥70	136	0	0	0	0	3	28	105

TABLE E-5
NUMBER OF MARRIAGES FOR BRIDE BY NUMBER OF MARRIAGES FOR GROOM
MASSACHUSETTS OCCURRENCE
1988

NUMBER OF MARRIAGES						
BRIDE	GROOM					
	TOTAL	1	2	3	4	≥5
TOTAL	49,941	36,676	11,459	1,623	166	17
1	37,458	31,767	5,165	486	34	6
2	10,695	4,475	5,297	826	91	6
3	1,588	390	906	257	31	4
4	172	41	81	41	8	1
≥5	28	3	10	13	2	0

POPULATION

SECTION F
POPULATION

The population data in this section are presented for use in computing rates for small areas and for reporting changes over time by municipality and county. They are based primarily on the federal census for decennial years, e.g., 1980, and on the Commonwealth census for intercensal years, e.g., 1975, and on the Massachusetts Institute for Social and Economic Research (MISER) estimates for 1985 (see Table F–2).

Prior to 1985, the Massachusetts State Census method of enumeration differed from the federal census. Generally, the state figures excluded non–resident students and military families residing in the Commonwealth; they are included in the U.S. Census definition of resident.

The Massachusetts population estimates for 1980–1988 (Table F–4) are interpolations based on the 1980 federal census and the 1990 population projections provided by MISER.

FIGURE F-1

MASSACHUSETTS POPULATION
1900-1988

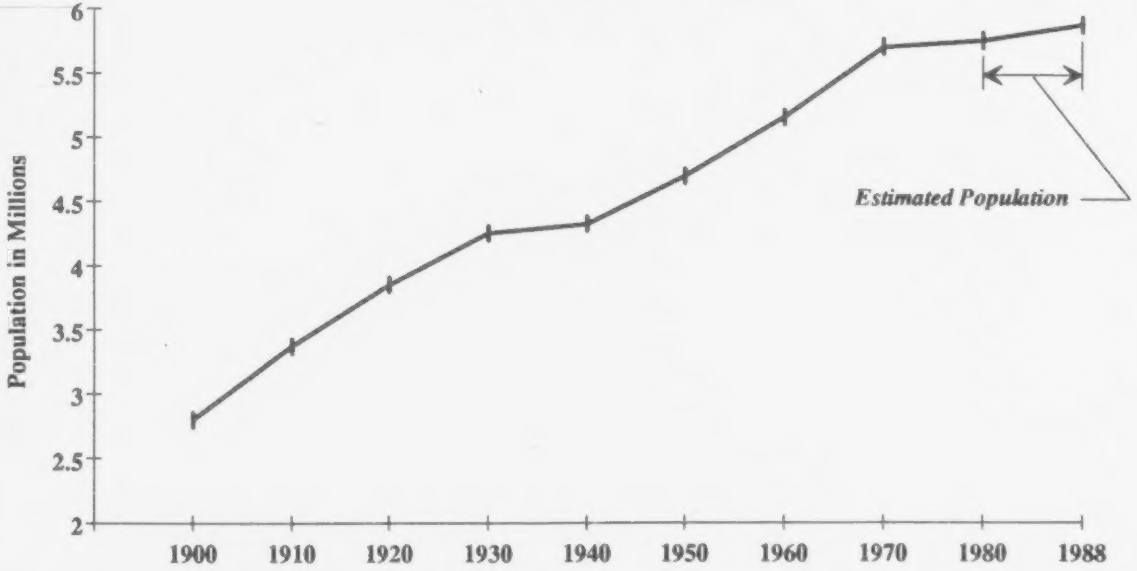

TABLE F-1
POPULATION BY RACE, AGE AND SEX
MASSACHUSETTS
1980

AGE	*SEX*	*TOTAL*	*WHITE*	*BLACK*	*OTHER & UNKNOWN*
UNDER 1	MALE	36,771	32,822	2,076	1,873
	FEMALE	34,959	31,174	1,938	1,847
	TOTAL	71,730	63,996	4,014	3,720
1-4	MALE	136,258	122,083	7,454	6,721
	FEMALE	129,227	115,440	7,190	6,597
	TOTAL	265,485	237,523	14,644	13,318
5-9	MALE	191,602	173,505	9,866	8,231
	FEMALE	183,132	165,337	9,819	7,976
	TOTAL	374,734	338,842	19,685	16,207
10-14	MALE	235,669	216,445	11,636	7,588
	FEMALE	225,663	206,831	11,429	7,403
	TOTAL	461,332	423,276	23,065	14,991
15-19	MALE	274,859	253,767	12,934	8,158
	FEMALE	273,380	252,117	13,106	8,157
	TOTAL	548,239	505,884	26,040	16,315
20-24	MALE	270,713	250,616	11,558	8,539
	FEMALE	282,189	260,612	12,809	8,768
	TOTAL	552,902	511,228	24,367	17,307
25-29	MALE	239,341	221,554	9,952	7,835
	FEMALE	249,834	230,586	11,031	8,217
	TOTAL	489,175	452,140	20,983	16,052
30-34	MALE	217,649	202,785	8,306	6,558
	FEMALE	228,746	211,798	9,634	7,314
	TOTAL	446,395	414,583	17,940	13,872
35-39	MALE	169,502	158,362	6,577	4,563
	FEMALE	179,050	166,127	7,956	4,967
	TOTAL	348,552	324,489	14,533	9,530
40-44	MALE	134,925	126,332	5,013	3,580
	FEMALE	143,823	134,182	5,866	3,775
	TOTAL	278,748	260,514	10,879	7,355

TABLE F-1 (continued)
POPULATION BY RACE, AGE AND SEX
MASSACHUSETTS
1980

AGE	*SEX*	*TOTAL*	*WHITE*	*BLACK*	*OTHER & UNKNOWN*
45-49	MALE	134,444	127,300	4,329	2,815
	FEMALE	143,817	135,730	5,030	3,057
	TOTAL	278,261	263,030	9,359	5,872
50-54	MALE	146,211	139,828	4,057	2,326
	FEMALE	160,363	152,917	4,793	2,653
	TOTAL	306,574	292,745	8,850	4,979
55-59	MALE	145,603	140,132	3,587	1,884
	FEMALE	165,392	159,005	4,304	2,083
	TOTAL	310,995	299,137	7,891	3,967
60-64	MALE	126,323	122,160	2,803	1,360
	FEMALE	151,061	145,859	3,510	1,692
	TOTAL	277,384	268,019	6,313	3,052
65-69	MALE	101,023	98,076	1,953	994
	FEMALE	134,551	130,398	2,810	1,343
	TOTAL	235,574	228,474	4,763	2,337
70-74	MALE	73,235	71,293	1,285	657
	FEMALE	113,806	110,942	1,892	972
	TOTAL	187,041	182,235	3,177	1,629
75-79	MALE	48,145	46,859	810	476
	FEMALE	89,683	87,573	1,441	669
	TOTAL	137,828	134,432	2,251	1,145
80-84	MALE	28,513	27,747	480	286
	FEMALE	63,667	62,351	899	417
	TOTAL	92,180	90,098	1,379	703
85 & OVER	MALE	20,107	19,485	374	248
	FEMALE	53,801	52,706	772	323
	TOTAL	73,908	72,191	1,146	571
TOTAL	MALE	2,730,893	2,551,151	105,050	74,692
	FEMALE	3,006,144	2,811,685	116,229	78,230
	TOTAL	5,737,037	5,362,836	221,279	152,922
		(100.0%)	(93.4%)	(3.9%)	(2.7%)

Source: U.S. Bureau of the Census

FIGURE F - 2

1980 MASSACHUSETTS POPULATION BY AGE

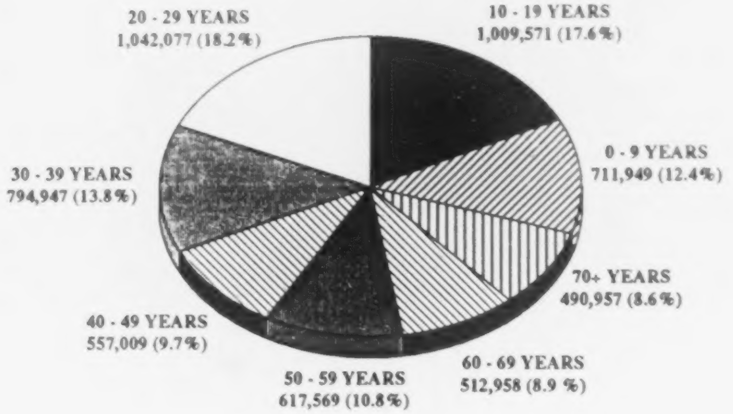

FIGURE F - 3

1980 MASSACHUSETTS POPULATION BY RACE

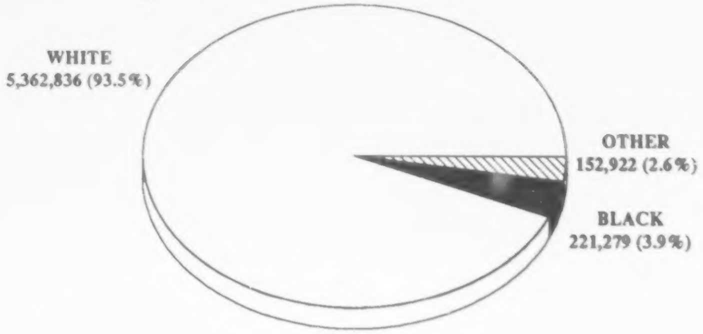

TABLE F-2
MASSACHUSETTS POPULATION BY COUNTIES
1960-1985

	Federal 1960	State 1965	Federal 1970	State 1975	Federal 1980	Estimate 1985*
STATE	5,148,578	5,295,281	5,689,170	5,789,478	5,737,037	5,814,873
Counties						
Barnstable	70,286	73,557	96,656	126,481	147,925	166,406
Berkshire	142,135	145,597	149,402	148,069	145,110	142,694
Bristol	398,488	415,242	444,301	461,852	474,641	484,635
Dukes	5,829	5,948	6,117	7,951	8,942	10,476
Essex	568,831	608,996	637,887	631,627	633,632	641,226
Franklin	54,864	57,687	59,210	63,420	64,317	65,790
Hampden	429,353	435,281	459,050	461,659	443,018	441,908
Hampshire	103,229	100,065	123,981	122,729	138,813	143,661
Middlesex	1,238,742	1,280,235	1,397,268	1,397,524	1,367,034	1,366,744
Nantucket	3,559	3,714	3,774	5,559	5,087	5,739
Norfolk	510,256	560,137	605,051	620,346	606,587	605,013
Plymouth	248,449	292,697	333,314	377,500	405,437	427,488
Suffolk	791,329	706,216	735,190	724,703	650,142	656,557
Worcester	583,228	609,909	637,969	640,058	646,352	656,536

*Source: Massachusetts Institute for Social and Economic Research (MISER).

TABLE F-3
MASSACHUSETTS POPULATION BY CITY AND TOWN
1970 and 1980

City/Town	*1970 U.S. Census*	*1980 U.S. Census*
Abington	12,334	13,517
Acton	14,770	17,544
Acushnet	7,767	8,704
Adams	11,772	10,381
Agawam	21,717	26,271
Alford	302	394
Amesbury	11,388	13,971
Amherst	26,331	33,229
Andover	23,695	26,370
Arlington	53,524	48,219
Ashburnham	3,484	4,075
Ashby	2,274	2,311
Ashfield	1,274	1,458
Ashland	8,882	9,165
Athol	11,185	10,634
Attleboro	32,907	34,196
Auburn	15,347	14,845
Avon	5,295	5,026
Ayer	8,325	6,993
Barnstable	19,842	30,898
Barre	3,825	4,102
Becket	929	1,339
Bedford	13,513	13,067
Belchertown	5,936	8,339
Bellingham	13,967	14,300
Belmont	28,285	26,100
Berkley	2,027	2,731
Berlin	2,099	2,215
Bernardston	1,659	1,750
Beverly	38,348	37,655
Billerica	31,648	36,727
Blackstone	6,566	6,570
Blandford	863	1,038
Bolton	1,905	2,530
Boston	641,071	562,994
Bourne	12,636	13,874
Boxborough	1,451	3,126
Boxford	4,032	5,374
Boylston	2,774	3,470
Braintree	35,050	36,337
Brewster	1,790	5,226
Bridgewater	11,829	17,202
Brimfield	1,907	2,318
Brockton	89,040	95,172
Brookfield	2,063	2,397
Brookline	58,886	55,062
Buckland	1,892	1,864
Burlington	21,980	23,486
Cambridge	100,361	95,322
Canton	17,100	18,182
Carlisle	2,871	3,306
Carver	2,420	6,988
Charlemont	897	1,149
Charlton	4,654	6,719
Chatham	4,554	6,071
Chelmsford	31,432	31,174
Chelsea	30,625	25,431
Cheshire	3,006	3,124
Chester	1,025	1,123
Chesterfield	704	1,000
Chicopee	66,676	55,112
Chilmark	340	489
Clarksburg	1,987	1,871
Clinton	13,383	12,771
Cohasset	6,954	7,174
Colrain	1,420	1,552
Concord	16,148	16,293
Conway	998	1,213
Cummington	562	657
Dalton	7,505	6,797
Danvers	26,151	24,100
Dartmouth	18,800	23,966
Dedham	26,938	25,298
Deerfield	3,850	4,517
Dennis	6,454	12,360
Dighton	4,667	5,352
Douglas	2,947	3,730
Dover	4,529	4,703
Dracut	18,214	21,249
Dudley	8,087	8,717
Dunstable	1,292	1,671
Duxbury	7,636	11,807
East Bridgewater	8,347	9,945
East Brookfield	1,800	1,955
East Longmeadow	13,029	12,905
Eastham	2,043	3,472
Easthampton	13,012	15,580
Easton	12,157	16,623
Edgartown	1,481	2,204
Egremont	1,138	1,311
Erving	1,260	1,326
Essex	2,670	2,998
Everett	42,485	37,195
Fairhaven	16,332	15,759
Fall River	96,898	92,574
Falmouth	15,942	23,640
Fitchburg	43,343	39,580
Florida	672	730
Foxborough	14,218	14,148
Framingham	64,048	65,113
Franklin	17,830	18,217
Freetown	4,270	7,058
Gardner	19,748	17,900
Gay Head	118	220
Georgetown	5,290	5,687
Gill	1,100	1,259
Gloucester	27,941	27,768
Goshen	483	651
Gosnold	83	63
Grafton	11,659	11,238
Granby	5,473	5,380
Granville	1,008	1,204
Great Barrington	7,537	7,405
Greenfield	18,116	18,436
Groton	5,109	6,154
Groveland	5,382	5,040
Hadley	3,750	4,125
Halifax	3,537	5,513
Hamilton	6,373	6,960
Hampden	4,572	4,745
Hancock	675	643
Hanover	10,107	11,358
Hanson	7,148	8,617
Hardwick	2,379	2,272
Harvard	12,494	12,170
Harwich	5,892	8,971
Hatfield	2,825	3,045
Haverhill	46,120	46,865

TABLE F-3 (Continued)
MASSACHUSETTS POPULATION BY CITY AND TOWN
1970 and 1980

City/Town	*1970 U.S. Census*	*1980 U.S. Census*
Hawley	224	280
Heath	383	482
Hingham	18,845	20,339
Hinsdale	1,588	1,707
Holbrook	11,775	11,140
Holden	12,564	13,336
Holland	931	1,589
Holliston	12,069	12,622
Holyoke	50,112	44,678
Hopedale	4,292	3,905
Hopkinton	5,981	7,114
Hubbardston	1,437	1,797
Hudson	16,084	16,408
Hull	9,961	9,714
Huntington	1,593	1,804
Ipswich	10,750	11,158
Kingston	5,999	7,362
Lakeville	4,376	5,931
Lancaster	6,095	6,334
Lanesborough	2,972	3,131
Lawrence	66,915	63,175
Lee	6,426	6,247
Leicester	9,140	9,446
Lenox	5,804	6,523
Leominster	32,939	34,508
Leverett	1,005	1,471
Lexington	31,886	29,479
Leyden	376	498
Lincoln	7,567	7,098
Littleton	6,380	6,970
Longmeadow	15,630	16,301
Lowell	94,23	992,418
Ludlow	17,580	18,150
Lunenburg	7,419	8,405
Lynn	90,294	78,471
Lynnfield	10,826	11,267
Malden	56,127	53,386
Manchester	5,151	5,424
Mansfield	9,939	13,453
Marblehead	21,295	20,126
Marion	3,466	3,932
Marlborough	27,936	30,617
Marshfield	15,223	20,916
Mashpee	1,288	3,700
Mattapoisett	4,500	5,597
Maynard	9,710	9,590
Medfield	9,821	10,220
Medford	64,397	58,076
Medway	7,938	8,447
Melrose	33,180	30,055
Mendon	2,524	3,108
Merrimac	4,245	4,451
Methuen	35,456	36,701
Middleborough	13,607	16,404
Middlefield	288	385
Middleton	4,044	4,135
Milford	19,352	23,390
Millbury	11,987	11,808
Millis	5,686	6,908
Millville	1,764	1,693
Milton	27,190	25,860
Monroe	216	179
Monson	7,355	7,315
Montague	8,451	8,011
Monterey	600	818
Montgomery	446	637
Mount Washington	52	93
Nahant	4,119	3,947
Nantucket	3,774	5,087
Natick	31,057	29,461
Needham	29,748	27,901
New Ashford	183	159
New Bedford	101,777	98,478
New Braintree	631	671
New Marlborough	1,031	1,160
New Salem	474	688
Newbury	3,804	4,529
Newburyport	15,807	15,900
Newton	91,066	83,622
Norfolk	4,656	6,363
North Adams	19,195	18,063
North Andover	16,284	20,129
North Attleboro	18,665	21,095
North Brookfield	3,967	4,150
North Reading	11,264	11,455
Northampton	29,664	29,286
Northborough	9,218	10,568
Northbridge	11,795	12,246
Northfield	2,631	2,386
Norton	9,487	12,690
Norwell	7,796	9,182
Norwood	30,815	29,711
Oak Bluffs	1,385	1,984
Oakham	730	994
Orange	6,104	6,844
Orleans	3,055	5,306
Otis	820	963
Oxford	10,345	11,680
Palmer	11,680	11,389
Paxton	3,731	3,762
Peabody	48,080	45,976
Pelham	937	1,112
Pembroke	11,193	13,487
Pepperell	5,887	8,061
Peru	256	633
Petersham	1,014	1,024
Phillipston	872	953
Pittsfield	57,020	51,974
Plainfield	287	425
Plainville	4,953	5,857
Plymouth	18,606	35,913
Plympton	1,224	1,974
Princeton	1,681	2,425
Provincetown	2,911	3,536
Quincy	87,966	84,743
Randolph	27,035	28,218
Raynham	6,705	9,085
Reading	22,539	22,678
Rehoboth	6,512	7,570
Revere	43,159	42,423
Richmond	1,461	1,659
Rochester	1,770	3,205
Rockland	15,674	15,695
Rockport	5,636	6,345
Rowe	277	336
Rowley	3,040	3,867
Royalston	809	955
Russell	1,382	1,570
Rutland	3,198	4,334
Salem	40,556	38,220

TABLE F-3 (Continued)
MASSACHUSETTS POPULATION BY CITY AND TOWN
1970 and 1980

City/Town	*1970 U.S. Census*	*1980 U.S. Census*
Salisbury	4,179	5,973
Sandisfield	547	720
Sandwich	5,239	8,727
Saugus	25,110	24,746
Savoy	322	644
Scituate	16,973	17,317
Seekonk	11,116	12,269
Sharon	12,367	13,601
Sheffield	2,374	2,743
Shelburne	1,836	2,002
Sherborn	3,309	4,049
Shirley	4,909	5,124
Shrewsbury	19,196	22,674
Shutesbury	489	1,049
Somerset	18,088	18,813
Somerville	88,779	77,372
South Hadley	17,033	16,399
Southampton	3,069	4,137
Southborough	5,798	6,193
Southbridge	17,057	16,665
Southwick	6,330	7,382
Spencer	8,779	10,774
Springfield	163,905	152,319
Sterling	4,247	5,440
Stockbridge	2,312	2,328
Stoneham	20,725	21,424
Stoughton	23,459	26,710
Stow	3,984	5,144
Sturbridge	4,878	5,976
Sudbury	13,506	14,027
Sunderland	2,236	2,929
Sutton	4,590	5,855
Swampscott	13,578	13,837
Swansea	12,640	15,461
Taunton	43,756	45,001
Templeton	5,863	6,070
Tewksbury	22,755	24,635
Tisbury	2,257	2,972
Tolland	172	235
Topsfield	5,225	5,709
Townsend	4,281	7,201
Truro	1,234	1,486
Tyngsborough	4,204	5,683
Tyringham	234	344
Upton	3,484	3,886
Uxbridge	8,253	8,374
Wakefield	25,402	24,895
Wales	852	1,177
Walpole	18,149	18,859
Waltham	61,582	58,200
Ware	8,187	8,953
Wareham	11,492	18,457
Warren	3,633	3,777
Warwick	492	603
Washington	406	587
Watertown	39,307	34,384
Wayland	13,461	12,170
Webster	14,917	14,480
Wellesley	28,051	27,209
Wellfleet	1,743	2,209
Wendell	405	694
Wenham	3,849	3,897
West Boylston	6,369	6,204
West Bridgewater	7,152	6,359
West Brookfield	2,653	3,026
West Newbury	2,254	2,861
West Springfield	28,461	27,042
West Stockbridge	1,354	1,280
West Tisbury	453	1,010
Westborough	12,594	13,619
Westfield	31,433	36,465
Westford	10,368	13,434
Westhampton	793	1,137
Westminster	4,273	5,139
Weston	10,870	11,169
Westport	9,791	13,763
Westwood	12,750	13,212
Weymouth	54,610	55,601
Whately	1,145	1,341
Whitman	13,059	13,534
Wilbraham	11,984	12,053
Williamsburg	2,342	2,237
Williamstown	8,454	8,741
Wilmington	17,102	17,471
Winchendon	6,635	7,019
Winchester	22,269	20,701
Windsor	468	598
Winthrop	20,335	19,294
Woburn	37,406	36,626
Worcester	176,572	161,799
Worthington	712	932
Wrentham	7,315	7,580
Yarmouth	12,033	18,449
STATEWIDE TOTALS	**5,689,170**	**5,737,037**

TABLE F-4
POPULATION ESTIMATES, MASSACHUSETTS*
1980-1988

AGE GROUP		*TOTAL*	*MALE*	*FEMALE*
0-4	1980	337,215	173,029	164,186
	1981	342,815	175,696	167,119
	1982	348,357	178,322	170,035
	1983	353,950	180,977	172,973
	1984	359,499	183,609	175,890
	1985	365,227	186,336	178,891
	1986	370,644	188,911	181,733
	1987	376,252	191,570	184,682
	1988	381,786	194,198	187,588
5-9	1980	374,734	191,602	183,132
	1981	382,783	195,479	187,304
	1982	390,776	199,324	191,452
	1983	398,807	203,201	195,606
	1984	406,798	207,044	199,754
	1985	414,982	210,993	203,989
	1986	422,817	214,769	208,048
	1987	430,881	218,653	212,228
	1988	438,839	222,489	216,350
10-14	1980	461,332	235,669	225,663
	1981	448,375	228,815	219,560
	1982	435,497	222,005	213,492
	1983	422,551	215,154	207,397
	1984	409,663	208,337	201,326
	1985	396,601	201,433	195,168
	1986	383,806	194,672	189,134
	1987	370,866	187,825	183,041
	1988	357,972	181,004	176,968
15-19	1980	548,239	274,859	273,380
	1981	531,132	265,930	265,202
	1982	514,073	257,012	257,061
	1983	496,969	248,091	248,878
	1984	479,891	239,169	240,722
	1985	462,673	230,178	232,495
	1986	445,754	221,347	224,407
	1987	428,617	212,392	216,225
	1988	411,572	203,504	208,068

TABLE F-4 (continued)
POPULATION ESTIMATES, MASSACHUSETTS*
1980-1988

AGE GROUP		*TOTAL*	*MALE*	*FEMALE*
20-24	1980	552,902	270,713	282,189
	1981	542,736	265,216	277,520
	1982	532,642	259,763	272,879
	1983	522,468	254,260	268,208
	1984	512,367	248,792	263,575
	1985	502,121	243,261	258,860
	1986	492,076	237,835	254,241
	1987	481,926	232,344	249,582
	1988	471,801	226,864	244,937
25-29	1980	489,175	239,341	249,834
	1981	493,044	240,846	252,198
	1982	496,921	242,357	254,564
	1983	500,792	243,854	256,938
	1984	504,652	245,353	259,299
	1985	508,596	246,889	261,707
	1986	512,411	248,366	264,045
	1987	516,289	249,872	266,417
	1988	520,142	251,362	268,780
30-34	1980	446,395	217,649	228,746
	1981	457,542	224,039	233,503
	1982	468,636	230,411	238,225
	1983	479,789	236,803	242,986
	1984	490,905	243,186	247,719
	1985	502,135	249,625	252,510
	1986	513,131	255,936	257,195
	1987	524,287	262,335	261,952
	1988	535,400	268,711	266,689
35-39	1980	348,552	169,502	179,050
	1981	359,341	174,328	185,013
	1982	370,113	179,129	190,984
	1983	380,898	183,950	196,948
	1984	391,654	188,748	202,906
	1985	402,564	193,633	208,931
	1986	413,195	198,363	214,832
	1987	424,014	203,202	220,812
	1988	434,736	207,982	226,754

TABLE F-4 (continued)
POPULATION ESTIMATES, MASSACHUSETTS*
1980-1988

AGE GROUP		*TOTAL*	*MALE*	*FEMALE*
40-44	1980	278,748	134,925	143,823
	1981	292,647	141,203	151,444
	1982	306,457	147,434	159,023
	1983	320,348	153,710	166,638
	1984	334,166	159,940	174,226
	1985	348,205	166,286	181,919
	1986	361,903	172,459	189,444
	1987	375,788	178,731	197,057
	1988	389,612	184,965	204,647
45-49	1980	278,261	134,444	143,817
	1981	282,833	136,275	146,558
	1982	287,346	138,073	149,273
	1983	291,899	139,901	151,998
	1984	296,417	141,708	154,709
	1985	301,088	143,582	157,506
	1986	305,517	145,343	160,174
	1987	310,083	147,175	162,908
	1988	314,588	148,978	165,610
50-54	1980	306,574	146,211	160,363
	1981	301,594	143,584	158,010
	1982	296,655	140,958	155,697
	1983	291,665	138,318	153,347
	1984	286,727	135,704	151,023
	1985	281,677	133,039	148,638
	1986	276,790	130,444	146,346
	1987	271,823	127,817	144,006
	1988	266,862	125,190	141,672
55-59	1980	310,995	145,603	165,392
	1981	305,203	142,750	162,453
	1982	299,475	139,931	159,544
	1983	293,700	137,078	156,622
	1984	287,965	134,260	153,705
	1985	282,086	131,356	150,730
	1986	276,401	128,548	147,853
	1987	270,622	125,709	144,913
	1988	264,891	122,877	142,014

TABLE F-4 (continued)
POPULATION ESTIMATES, MASSACHUSETTS*
1980-1988

AGE GROUP		*TOTAL*	*MALE*	*FEMALE*
60-64	1980	277,384	126,323	151,061
	1981	276,091	125,512	150,579
	1982	274,784	124,707	150,077
	1983	273,496	123,894	149,602
	1984	272,181	123,073	149,108
	1985	270,891	122,260	148,631
	1986	269,624	121,478	148,146
	1987	268,307	120,655	147,652
	1988	267,021	119,844	147,177
65-69	1980	235,574	101,023	134,551
	1981	238,038	101,871	136,167
	1982	240,454	102,695	137,759
	1983	242,917	103,538	139,379
	1984	245,344	104,370	140,974
	1985	247,853	105,241	142,612
	1986	250,240	106,059	144,181
	1987	252,690	106,899	145,791
	1988	255,130	107,734	147,396
70-74	1980	187,041	73,235	113,806
	1981	189,630	74,235	115,395
	1982	192,183	75,222	116,961
	1983	194,759	76,222	118,537
	1984	197,323	77,210	120,113
	1985	199,983	78,250	121,733
	1986	202,448	79,192	123,256
	1987	205,049	80,195	124,854
	1988	207,588	81,180	126,408
75-79	1980	137,828	48,145	89,683
	1981	140,300	48,996	91,304
	1982	142,752	49,844	92,908
	1983	145,222	50,699	94,523
	1984	147,694	51,545	96,149
	1985	150,251	52,437	97,814
	1986	152,579	53,227	99,352
	1987	155,087	54,094	100,993
	1988	157,521	54,928	102,593

TABLE F-4 (continued)
POPULATION ESTIMATES, MASSACHUSETTS*
1980-1988

AGE GROUP		*TOTAL*	*MALE*	*FEMALE*
80-84	1980	92,180	28,513	63,667
	1981	93,363	28,809	64,554
	1982	94,522	29,101	65,421
	1983	95,692	29,393	66,299
	1984	96,841	29,682	67,159
	1985	98,073	29,995	68,078
	1986	99,160	30,242	68,918
	1987	100,350	30,547	69,803
	1988	101,479	30,823	70,656
85+	1980	73,908	20,107	53,801
	1981	75,099	20,191	54,908
	1982	76,276	20,277	55,999
	1983	77,449	20,351	57,098
	1984	78,611	20,426	58,185
	1985	79,867	20,539	59,328
	1986	81,008	20,614	60,394
	1987	82,187	20,695	61,492
	1988	83,343	20,763	62,580
TOTAL	**1980**	**5,737,037**	**2,730,893**	**3,006,144**
	1981	**5,752,566**	**2,733,775**	**3,018,791**
	1982	**5,767,919**	**2,736,565**	**3,031,354**
	1983	**5,783,371**	**2,739,394**	**3,043,977**
	1984	**5,798,698**	**2,742,156**	**3,056,542**
	1985	**5,814,873**	**2,745,333**	**3,069,540**
	1986	**5,829,504**	**2,747,805**	**3,081,699**
	1987	**5,845,118**	**2,750,710**	**3,094,408**
	1988	**5,860,283**	**2,753,396**	**3,106,887**

*THESE ESTIMATES ARE DERIVED FROM 1980 U.S. CENSUS COUNTS AND PROJECTIONS FOR 1990 PREPARED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

APPENDICES

USE ONLY STATE APPROVED RIBBONS AND MASS. STANDARD INK
AS REQUIRED BY GEN. LAWS, CHAP. 46, SECT. 4

The Commonwealth of Massachusetts
DEPARTMENT OF PUBLIC HEALTH
REGISTRY OF VITAL RECORDS AND STATISTICS
STANDARD CERTIFICATE OF LIVE BIRTH

1 RECORD NUMBER
002823

1A CERTIFICATE NUMBER (DPH USE ONLY)

2 FACILITY NUMBER

1
OCCURRENCE

FORM R 3C 125M 4/88 803911

CHILD

3 PLACE OF BIRTH
3C COUNTY
3B CITY/TOWN
3A FACILITY NAME—IF NOT IN FACILITY, NUMBER AND STREET
3D CITY/TOWN MAKING RETURN
3E REGISTERED NUMBER

NAME 4A FIRST 4B MIDDLE 4C LAST

5 SEX
6A PLURALITY (Specify Single, Twin, etc.)
6B BIRTH ORDER (If not single Specify Order: First, Second, etc.)
7 TIME M
8 DATE OF BIRTH (Month, Day, Year)

CERTIFIER

9A SIGNATURE (I Certify that the Child was Born Alive at Date and Time and Place Stated.)
9B TYPE OR PRINT NAME
9C LICENSE NUMBER
9D NO. & STREET 9E CITY/TOWN 9F STATE 9G ZIP CODE
9H DATE SIGNED (Month, Day, Year)
9I TYPE
9J TITLE

MOTHER

NAME 10A FIRST 10B MIDDLE 10C LAST 10D MAIDEN SURNAME
BIRTHPLACE 11A CITY/TOWN 11B STATE/COUNTRY
12 DATE OF BIRTH (Month, Day, Year)
RESIDENCE (Do not use mailing address) 13A NUMBER AND STREET 13B CITY/TOWN 13C COUNTY 13D STATE 13E ZIP CODE

FATHER

NAME 14A FIRST 14B MIDDLE 14C LAST
BIRTHPLACE 15A CITY/TOWN 15B STATE/COUNTRY
16 DATE OF BIRTH (Month, Day, Year)

INFORMANT

17A I (WE) CERTIFY THAT THE PERSONAL INFORMATION APPEARING ABOVE IS TRUE AND CORRECT
17B RELATIONSHIP TO CHILD
17C DATE SIGNED (Month, Day, Year)
17D MAILING ADDRESS (If different from item #13 above) NUMBER AND STREET CITY STATE ZIP CODE

CLERK

18 DATE OF RECORD (Month, Day, Year)
19 SUPPLEMENT FILED (Month, Day, Year)
20 CLERK/REGISTRAR
21 CLERK/REGISTRAR DPH USE ONLY

22A SOCIAL SECURITY CARD
INITIALS
22B RESIDENT COPY
INITIALS
22C CENSUS

CONFIDENTIAL INFORMATION — CHAPTER 111 SECTION 24B AS AMENDED

MOTHER
23A OCCUPATION PAST YEAR
23B INDUSTRY PAST YEAR
24A RACE
24B ANCESTRY
25 EDUCATION A Elem./Sec. (0-12) B College (0-4,5+)

FATHER
26A OCCUPATION PAST YEAR
26B INDUSTRY PAST YEAR
27A RACE
27B ANCESTRY
28 EDUCATION A Elem/Sec (0-12) B College (0-4,5+)

29 PRIOR LIVE BIRTHS A NOW LIVING B BORN LIVE NOW DEAD C DATE OF LAST LIVE BIRTH (Month, Day, Year)
30 TERMINATIONS DATE LAST TERMINATION (Month, Day, Year)
31A DATE LAST MENSES BEGAN (Month, Day, Year)
31B CLINICAL EST GEST (WKS)
32 MONTH OF PREG PRENATAL CARE BEGAN (First, Second, etc.)
33 TOTAL NUMBER PRENATAL VISITS # ☐ NONE
34 WEIGHT GAINED DURING PREG LBS
35A TYPE OF PRACTITIONER PROVIDING PRENATAL CARE
35B SITE OF PRENATAL CARE
35C PRENATAL CARE METHOD OF PAYMENT
36A ALCOHOL
36B TOBACCO
36C MEDICAL RISK FACTORS (Separate by commas—include up to 8 items)
37 METHOD OF DELIVERY
38 COMPLICATIONS OF LABOR AND DELIVERY (Separate by commas—include up to 10 items)
39 OBSTETRIC PROCEDURES (Separate by commas—include up to 10 items)
40 BIRTHWEIGHT
41 APGAR SCORE (0-10) A 1 Minute B 5 Minute
42 DELIVERY METHOD OF PAYMENT
43 IS MOTHER MARRIED?
44 CONGENITAL ANOMALIES (include up to 5 items)
45 ABNORMAL CONDITIONS OF NEWBORN (include up to 5 items)
46 AT TIME OF THIS REPORT, CHILD IS
47 IS MOTHER BREASTFEEDING?
48 MOTHER TRANSFERRED PRIOR TO DELIVERY?
49 INFANT TRANSFERRED?

Detach and Return to Department of Public Health — Registry of Vital Records and Statistics.

[INSTRUCTIONS ON REVERSE SIDE]
FOR USE BY
PHYSICIANS AND
MEDICAL EXAMINERS

The Commonwealth of Massachusetts

STANDARD CERTIFICATE OF DEATH
REGISTRY OF VITAL RECORDS AND STATISTICS

REGISTERED NUMBER

STATE USE ONLY

STATE USE ONLY

1.
72 PLACE 74
75 HOSPITAL 78
2.
9 RACE
19 NATIVITY 20
32 RESIDENCE 34
35 OUT OF STATE 37
38 CENSUS 41
42 AUTOPSY
43 MED. EXAM.

DECEDENT

DECEDENT NAME FIRST MIDDLE LAST 1	SEX 2	DATE OF DEATH (Mo Day Yr) 3		
PLACE OF DEATH (CITY OR TOWN) 4a	COUNTY OF DEATH 4b	HOSPITAL OR OTHER INSTITUTION Name (If not in either give street and number) 4c	IF IN HOSPITAL D O A (Yes or No) 4d	
RACE (e.g. White Black American Indian etc) (Specify) 5	AGE Last Birthday (Yrs) 6a	UNDER 1 YEAR MOS DAYS 6b	UNDER 1 DAY HOURS MINS 6c	DATE OF BIRTH (Mo Day Yr) 7
STATE OF BIRTH (If not in U S A name country) 8				
MARRIED NEVER MARRIED WIDOWED OR DIVORCED 9	SPOUSE (If wife give maiden name) 10	USUAL OCCUPATION (Prior if Retired) 11a	KIND OF BUSINESS OR INDUSTRY 11b	
SOCIAL SECURITY NUMBER 12	IF U S WAR VETERAN SPECIFY WAR 13	RESIDENCE STREET AND NUMBER CITY OR TOWN COUNTY STATE ZIP CODE 14		
FATHER FULL NAME 15a	STATE OF BIRTH (If not in U S A name country) 15b	MOTHER NAME (GIVEN) (MAIDEN) 16a	STATE OF BIRTH (If not in U S A name country) 16b	

INFORMANT

INFORMANT NAME AND ADDRESS 17a	RELATIONSHIP 17b

DISPOSITION

TYPE OF DISPOSITION (Specify Burial Cremation, Other) 18a	DATE OF DISPOSITION 18b	PLACE OF DISPOSITION AND LOCATION CITY OR TOWN STATE 18c
FUNERAL SERVICE LICENSEE 19a	NAME OF FACILITY 19b	ADDRESS OF FACILITY 19c

CAUSE OF DEATH

20 IMMEDIATE CAUSE ENTER ONLY ONE CAUSE PER LINE FOR (a) (b) AND (c) (PRINT OR TYPE LEGIBLY)

PART I
(a) — Interval between onset and death
DUE TO OR AS A CONSEQUENCE OF
(b) — Interval between onset and death
DUE TO OR AS A CONSEQUENCE OF
(c) — Interval between onset and death

PART II OTHER SIGNIFICANT CONDITIONS Conditions contributing to death but not related to cause given in Part I (a)	AUTOPSY (Yes or No) 21	WAS CASE REFERRED TO MED EXAM (Yes or No) 22

ACC SUICIDE HOM UNDET OR PENDING INVEST (Specify) 23	DATE OF INJURY (Mo Day Yr) 24a	HOUR OF INJURY 24b M	DESCRIBE HOW INJURY OCCURRED 24c
INJURY AT WORK (Specify Yes or No) 24d	PLACE OF INJURY - At home farm street factory office building etc (Specify) 24e	LOCATION STREET CITY OR TOWN STATE 24f	

CERTIFIER

To be Completed by CERTIFYING PHYSICIAN Only

25a To the best of my knowledge death occurred at the time date and place and due to the cause(s) stated
(Signature and Title) ▶

DATE SIGNED (Mo Day Yr) 25b	HOUR OF DEATH 25c M
NAME OF ATTENDING PHYSICIAN IF OTHER THAN CERTIFIER (Type or Print) 25d	

To be Completed by MEDICAL EXAMINER Only

26a On the basis of examination and/or investigation in my opinion death occurred at the time date and place and due to the cause(s) stated
(Signature and Title) ▶

DATE SIGNED (Mo Day Yr) 26b	HOUR OF DEATH 26c M
PRONOUNCED DEAD (Mo Day Yr) 26d ON	PRONOUNCED DEAD (Hour) 26e AT M

NAME AND ADDRESS OF CERTIFYING PHYSICIAN OR MEDICAL EXAMINER (Type or Print)
27

28 BURIAL PERMIT ISSUED ON ________ (DATE)
SIGNATURE-BD HEALTH AGT

29 RECEIVED IN THE CITY OR TOWN OF ________
CLERK'S SIGNATURE

(DATE RECEIVED)

BLACK INK ONLY

R-301R

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH
REGISTRY OF VITAL RECORDS AND STATISTICS

REPORT OF FETAL DEATH

STATE FILE NUMBER

1a HOSPITAL - NAME (If not in hospital, give street and number)
1b CITY, TOWN OR LOCATION OF DELIVERY
1c COUNTY OF DELIVERY

2a DATE OF DELIVERY (Month Day Year)
2b HOUR OF DELIVERY M
3 SEX OF FETUS
4 WEIGHT OF FETUS

MOTHER

5a MOTHER - MAIDEN NAME FIRST MIDDLE LAST
5b AGE (At time of this delivery)
6a RESIDENCE - STATE
6b COUNTY
6c CITY, TOWN OR LOCATION
6d STREET AND NUMBER

7 RACE - (e.g. White, Black, American Indian, etc.) (Specify)
8 EDUCATION (Specify only highest grade completed) (Elementary or Secondary (0-12)) College (1-4 or 5+)
9 DATE LAST NORMAL MENSES BEGAN (Month Day Year)
10 IS MOTHER MARRIED? (Specify yes or no)

PREGNANCY HISTORY (Complete each section)

LIVE BIRTHS
11a Now living Number ___ None ☐
11b Now dead Number ___ None ☐
11e DATE OF LAST LIVE BIRTH (Month Year)

OTHER TERMINATIONS (Spontaneous and induced)
11c Before 20 weeks Number ___ None ☐
11d After 20 weeks Number ___ (Do not include this fetus) None ☐
11f DATE OF LAST OTHER TERMINATION (as indicated in d or c above) (Month Year)

12a MONTH OF PREGNANCY PRENATAL CARE BEGAN First, second, etc. (Specify)
12b PRENATAL VISITS - Total number (If none, so state)
13a THIS BIRTH - Single, twin, triplet, etc. (Specify)
13b IF NOT SINGLE BIRTH - Born first, second, third, etc. (Specify)

FATHER

14a FATHER - NAME FIRST MIDDLE LAST
14b AGE (At time of this delivery)
14c RACE - (e.g. White, Black, American Indian, etc.) (Specify)
14d EDUCATION (Specify only highest grade completed) Elementary or Secondary (0-12) College (1-4 or 5+)

CAUSE OF FETAL DEATH

15 PART I Fetal or maternal condition directly causing fetal death } IMMEDIATE CAUSE (ENTER ONLY ONE CAUSE PER LINE FOR (a), (b), AND (c))
(a) ___ Specify Fetal or Maternal
Fetal and/or maternal conditions, if any, giving rise to the immediate cause (a), stating the underlying cause last } DUE TO OR AS A CONSEQUENCE OF
(b) ___ Specify Fetal or Maternal
DUE TO OR AS A CONSEQUENCE OF
(c) ___ Specify Fetal or Maternal

PART II OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER Conditions contributing to fetal death but not related to cause given in (a)
16 FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)
17 PHYSICIAN'S ESTIMATE OF GESTATION Weeks
18 AUTOPSY (Specify yes or no)

19 COMPLICATIONS OF PREGNANCY (Describe or write "none")
20 COMPLICATIONS OF LABOR AND/OR DELIVERY (Describe or write "none")
21 CONCURRENT ILLNESSES OR CONDITIONS AFFECTING THE PREGNANCY (Describe or write "none")
22 CONGENITAL MALFORMATIONS OR ANOMALIES OF FETUS (Describe or write "none")
23 NAME OF PHYSICIAN OR ATTENDANT (Type or print)
24 NAME OF PERSON COMPLETING REPORT (Type or print) TITLE

DISPOSITION

25 BURIAL, CREMATION, OR BY HOSPITAL
26 CEMETERY OR CREMATORY - NAME OR WRITE "NONE"
26a LOCATION CITY OR TOWN STATE
27 NAME OF FUNERAL DIRECTOR (IF ANY)
28 NAME OF FACILITY (Hospital or Funeral Home)
28a ADDRESS OF FACILITY

CERTIFIER

I HEREBY CERTIFY that this delivery occurred on the date stated and product of conception was not a live birth.

Signature of Attending Physician or Medical Examiner ___
TITLE

DEFINITION: "Fetal death" per chapter 111 section 202 of the M.G.L. means death prior to the complete expulsion or extraction from its mother of a fetus, irrespective of the duration of pregnancy, as indicated by the fact that after such expulsion or extraction the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. A fetal death does NOT include an induced abortion as defined in section 12K of chapter 112 of M.G.L. Spontaneous abortions are to be included.

TO BE REPORTED: Only fetal deaths of twenty weeks or more gestation or of a weight of 350 grams or more are to be reported.

INSTRUCTIONS: Return completed reported within 10 days to the Registry of Vital Records and Statistics, Room B-3, 150 Tremont St., Boston, MA 02111

FORM R - 304 - 3M - 7/78 CDT

FORM R-101

NOT VALID AFTER ______

THIS IS A PERMANENT RECORD. Use only durable black ink or approved black typewriter ribbon. Every item of information should be carefully supplied. ALTERATIONS AND ERASURES IN THIS CERTIFICATE ARE FORBIDDEN; PENALTY FOR VIOLATION, ONE HUNDRED DOLLARS.
SEE CHAP. 207, §§ 28, 28A, 48, 49, 54, 57 and CHAP. 46, § 18.

THIS CERTIFICATE IS NOT TO BE USED OUTSIDE OF MASSACHUSETTS.

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH
REGISTRY OF VITAL RECORDS AND STATISTICS

CERTIFICATE OF MARRIAGE

This certificate must be delivered to the person before whom the marriage is to be contracted before he proceeds to solemnize the same

(State number file)

(City or town making return)

Registered No.

Intention No.

1 Place of Marriage

City or Town
(Do not enter name of village or section of city or town)

2 Date of Marriage (Month) (Day) (Year)

3 FULL NAME GROOM	12 FULL NAME BRIDE
3A SURNAME AFTER MARRIAGE	12A SURNAME AFTER MARRIAGE
4 AGE · 5 OCCUPATION	13 AGE · 14 OCCUPATION
6 RESIDENCE NO. STREET CITY OR TOWN STATE	15 RESIDENCE NO. STREET CITY OR TOWN STATE
7 NUMBER OF MARRIAGE (1st, 2nd, 3rd, etc.) · 8 WIDOWED OR DIVORCED	16 NUMBER OF MARRIAGE (1st, 2nd, 3rd, etc.) · 17 WIDOWED OR DIVORCED
9 BIRTHPLACE (City or town) (State or country)	18 BIRTHPLACE (City or town) (State or country)
10 NAME OF FATHER	19 NAME OF FATHER
11 MAIDEN NAME OF MOTHER	20 MAIDEN NAME OF MOTHER

21 THE INTENTION OF MARRIAGE by the above-named persons was duly entered by me in the records of the (City or Town)
of (Name of city or town) according to law, this day of 19
Certificate issued (Month) (Day) (Year) by (City or Town Clerk or Registrar)

22 I HEREBY CERTIFY that I joined the above-named persons in marriage at No St.,
(If marriage was solemnized in a church, give its NAME instead of street and number)
(Name of city or town) on (Month) (Day) (Year)

Signature Official station
(Minister of the Gospel, Clergyman, Priest, Rabbi, or Justice of the Peace)

(Print or type name)

Residence No. St., City or Town of

23 Certificate received by city or town clerk (Month) (Day) (Year) CLERK OR REGISTRAR

R-408 30M 9/78 phr

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH

REGISTRY OF VITAL RECORDS AND STATISTICS

CERTIFICATE OF ABSOLUTE DIVORCE OR ANNULMENT

(Chap. 208, Sec. 46 G.L.)

R-408

HUSBAND - NAME	FIRST	MIDDLE	LAST

USUAL RESIDENCE - STREET ADDRESS 2a	CITY, TOWN OR LOCATION 2b.

COUNTY 2c	STATE 2d.	DATE OF BIRTH *(Mo., Day, Yr.)* 3.	NUMBER OF THIS MARRIAGE *(1st, 2nd, Specify)* 4.

WIFE - NAME 5a	FIRST	MIDDLE	LAST	MAIDEN NAME 5b.

USUAL RESIDENCE - STREET ADDRESS 6a	CITY, TOWN OR LOCATION 6b.

COUNTY 6c.	STATE 6d.	DATE OF BIRTH *(Mo., Day, Yr.)* 7.	NUMBER OF THIS MARRIAGE *(1st, 2nd, Specify)* 8.

DATE OF THIS MARRIAGE *(Mo., Day, Yr.)* 9.	NUMBER OF CHILDREN BORN ALIVE OF THIS MARRIAGE 10a.	NUMBER OF CHILDREN UNDER AGE 18 IN THIS FAMILY 10b.

FOR COURT USE ONLY

COUNTY OF JUDGMENT 11.	TITLE OF COURT 11a.

DATE OF JUDGMENT NISI *(Mo., Day, Yr.)* 12.	TYPE OF JUDGMENT - DIVORCE OR ANNULMENT *(Specify)* 13.	DATE OF JUDGMENT ABSOLUTE *(Mo., Day, Yr.)* 14.

DOCKET NUMBER 15.	NAME OF PLAINTIFF 16.	CAUSE FOR WHICH GRANTED 17.

SIGNATURE OF CERTIFYING OFFICIAL 18a.	TITLE OF OFFICIAL 18b.

REGISTRY OF VITAL RECORDS AND STATISTICS STAFF

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ASSISTANT REGISTRAR FOR REGISTRATION AND CERTIFICATION
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